MARICOPA ASSOCIATION of GOVERNMENTS

Williams Gateway Freeway Alignment and Environmental Overview Study

Alignment Features Report

Final

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SECTION 1 INTRODUCTION

1.1 Background

The Maricopa Association of Governments (MAG) initiated an Alignment and Environmental Overview Study for the future Williams Gateway Freeway (WGF) in November 2004. The purpose of the study is to identify a preferred corridor and alignment for the Maricopa County portion of this proposed freeway (Figure 1). The study will also develop detailed information regarding facility characteristics, right-of-way needs, environmental issues, and "environmental justice" concerns under Title VI of the Civil Rights Act of 1964. This information would help guide any future adjacent development in the area and provide essential input for the Arizona Department of Transportation (ADOT) studies regarding this corridor.

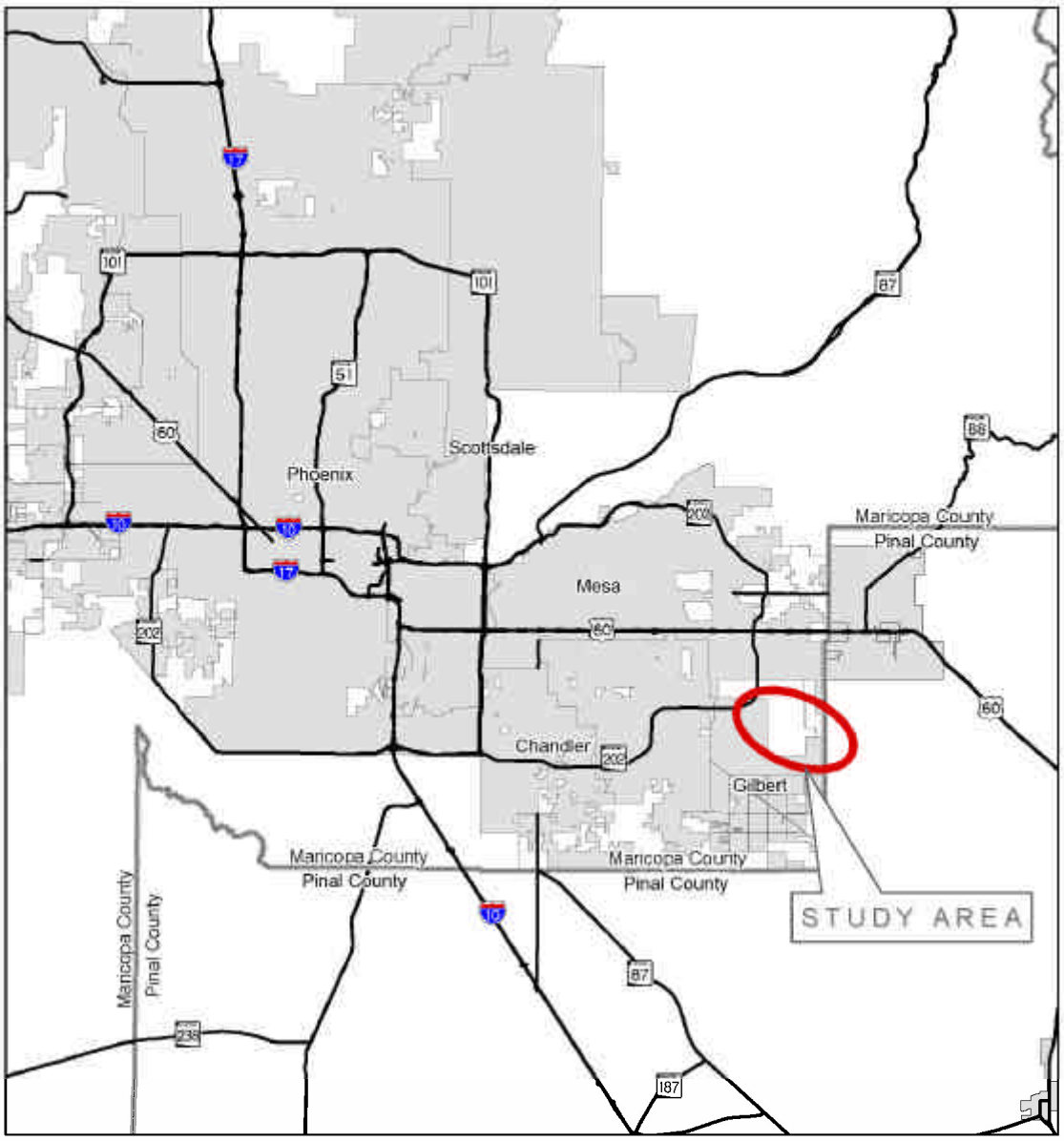
The Williams Gateway Corridor is an integral part of the MAG Regional Transportation Plan (RTP) adopted by the MAG Regional Council in November 2003, and endorsed one year later by voters in connection with their approval of Proposition 400. This corridor would begin at the Santan Freeway (State Route 202L) in the vicinity of Williams Gateway Airport, and then head generally eastward to the Maricopa/Pinal County line at Meridian Road. From there, ADOT is currently conducting a Corridor Definition Study to continue the route eastward through Pinal County to potentially link up with US 60 or some other state route. The corridor is approximately five miles long from the Santan Freeway to the Maricopa/Pinal county line.

In the 20-year phased transportation development program incorporated in the MAG RTP, the preliminary engineering, environmental clearance, and right-of-way protection for the WGF would occur in Phase I (2005-2010), with funding for final design and right-of-way provided in Phase II (2011-2015). ADOT would construct the Maricopa County portion of the facility during Phase III (2016-2020).

The study is organized into two phases. Phase 1 was completed in July 2005, which resulted in the MAG Regional Council adopting a preferred corridor for the future WGF. This phase of the study involved a tiered evaluation process, in which a wide range of corridor alternatives were systematically screened down to a single preferred alternative, as shown in Figure 2. A detail report of the Phase 1 effort is described in the *Preferred Alignment Summary Report, January 2006.*

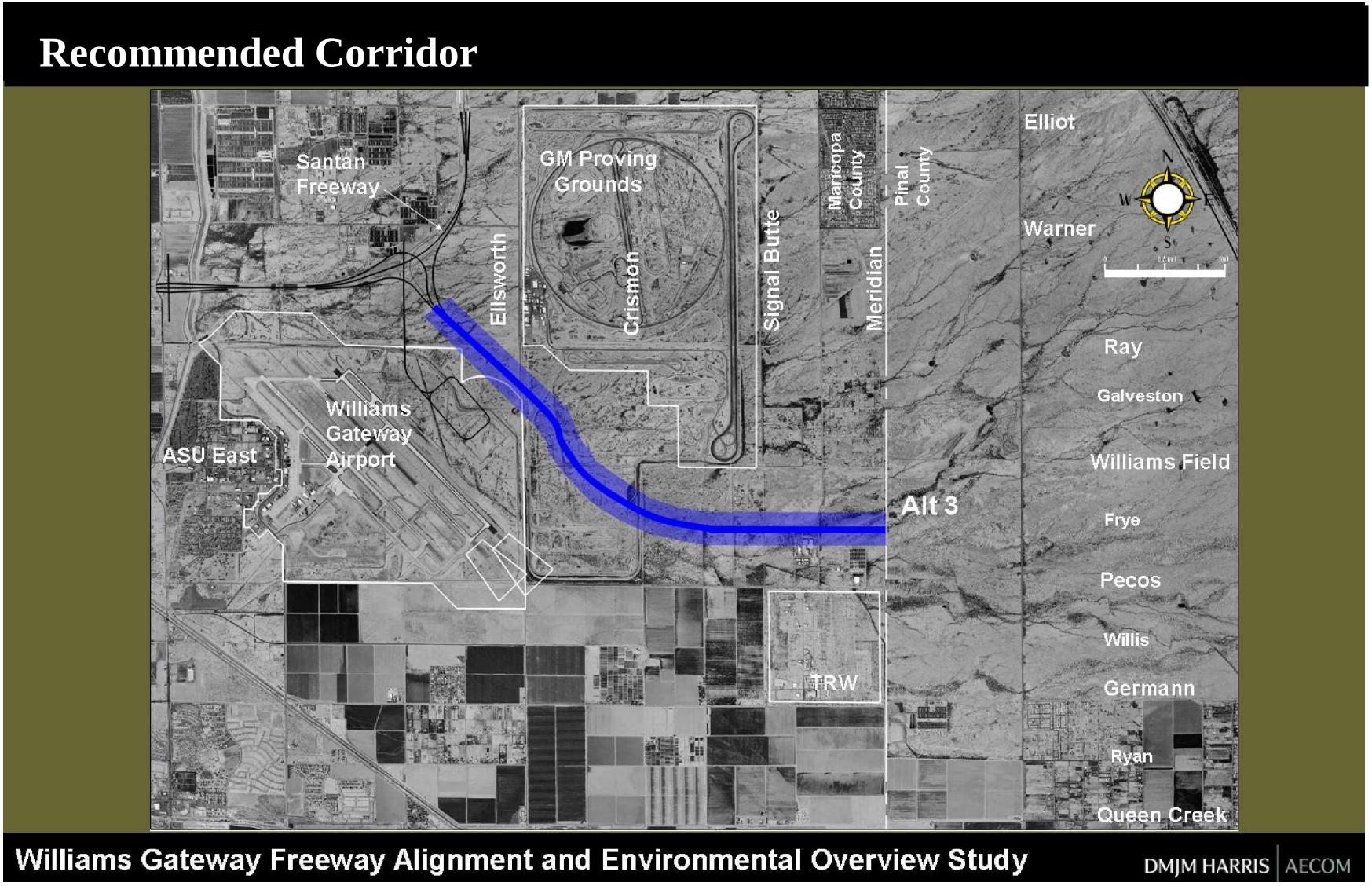
Phase 2 was completed in December 2005 and focused on the design features of the preferred alignment, right-of-way needs, an environmental overview, and Environmental Justice/Title VI analysis. The environmental overview and Environmental Justice/Title VI are documented in the *Environmental Overview*, *January 2006*. The design features of the preferred alignment are documented in this report.

Figure 1 County Location Map



Williams Gateway Freeway Alignment and Environmental Overview Study
Figure 1. County Location Map.

Figure 2 Preferred Alignment



1.2 Study Review Team Input/Stakeholder Input

MAG assembled a Study Review Team (SRT) to provide guidance and input from project stakeholders. The SRT met periodically throughout Phases 1 and 2, especially at milestones to review key findings. Representatives of the following agencies served on the SRT:

- City of Mesa
- City of Apache Junction
- Town of Gilbert
- Town of Queen Creek
- Williams Gateway Airport Authority
- Maricopa County (Department of Transportation and Flood Control District)
- Arizona Department of Transportation
- Maricopa Association of Governments

In Phase 1, a series of stakeholder interviews were conducted in December 2004 and January 2005 to uncover issues, concerns, and possible alignment suggestions. A public open house was conducted in early April 2005 to solicit comments on study issues.

In Phase 2, the project team met with the major property owners and businesses along the preferred alignment corridor to inform these major stakeholders of the design features associated with the freeway.

1.3 Purpose of Report

The purpose of this report is to detail the major features of the WGF in order to provide options for resolution of potential issues regarding factors such as design, right-of-way, access, and facility impacts.

Engineering design criteria are established so that the preferred alignment can be developed to a sufficient level of detail to address preliminary traffic operational and capacity issues; freeway profile (elevated versus depressed); service interchange and grade separation locations; onsite and offsite drainage requirements; potential utility conflicts; access to the William Gateway Airport and local street networks; right-of-way requirements; estimated construction costs; and the future extension of the alignment into Pinal County.

SECTION 2 DESIGN CRITERIA

The design criteria established for the WGF Alignment Study is based on the following:

Roadway Design Guidelines, ADOT, May 1996
Roadway Design Guidelines - ADOT, December 2005
A Policy on Geometric Design of Highways and Streets, AASHTO, 2004

2.1 Freeway

The following design criteria are established for the freeway mainline, service interchange ramps and system interchange directional ramps based on current ADOT criteria.

Table 2-1 Freeway Design Criteria

Design Speed	65 MPH 50 MPH 55 MPH	Freeway Service TI Ramps Directional Ramps
Control of Access	Full	
Maximum Degree of Curvature (Minimum Radius)	3 degrees 30 min (1637') 6 degrees 45 min (850') 5 degrees 30 min (1040')	Freeway Service TI Ramps Directional Ramps
Maximum Superelevation	6%	
Maximum Grade	3% 4% (upgrade) 5% (downgrade)	Freeway All Ramps All Ramps
Minimum Grade	0.4%	
Minimum Sight Distance (Based on 0% grade)	645 feet (65 mph) 425 feet (50 mph) 500 feet (55 mph)	Freeway Service TI Ramps Directional Ramps
Lane widths	12'	
Number of Lanes	Interim three general purpose each direction plus auxiliary lanes between service TI's two	Freeway Directional Ramps
Median Width	74', including 10' paved shoulders and provision for future HOV and general purpose lanes	Freeway
Shoulder Width	10' Right, 10' Left 8' Right, 4' Left	Freeway Directional Ramps
Vertical Clearance	16'-6" Minimum over freeway or crossroads	

2.2 Arterial Streets

The following design criteria are established for the arterial streets immediately within the influence of the Williams Gateway Freeway based on current City of Mesa and AASHTO criteria.

Table 2-2 Arterial Design Criteria

Design Speed	45 MPH
Maximum Degree of Curvature (Min Radius)	7 Degrees 45 min (740')
Maximum Superelevation	4%
Minimum Grade	0.4%
Minimum Sight Distance (based on 0% grade)	360 feet (45 mph)
Lane widths	11'
Number of Lanes	3 lanes in each direction
Median Width	14' typical
Vertical Clearance	16'-6" Minimum over freeway or crossroads

2.3 Offsite Drainage and Pump Station

The design criteria summarized below applies to the offsite channel and pump station designs. The majority of the criteria outlined below are found in the ADOT *Roadway Design Guidelines (RDG), May 1996.* Additional design criteria are taken from the Flood Control District of Maricopa County's *Drainage Design Manual for Maricopa County, Arizona, Volume II Hydraulics, November 1991* (revised January 1996).

2.3.1 Channel Design Criteria

The 100 - year design storm would be used to design the offsite stormwater collection system of the WGF, crossroad ramps, collector roads and crossroads. This frequency is necessary because the proposed offsite channel discharges into the existing Santan Freeway Channel, which was designed for the 100 - year storm event.

2.3.2 Cross Section

Side Slopes

Aggregate and unlined channels would have side slopes no steeper than 3:1 (H:V). Channels adjacent to a roadway without barrier protection would have side slopes no steeper than 4:1 (H:V). Concrete lined channels would have side slopes no steeper than 1.5:1 (H:V), with 2:1 (H:V) preferred.

Bottom Width

- Channels adjacent to a roadway without barrier protection would have a bottom width of eight feet as a preferred minimum and four feet as an absolute minimum.
- Concrete lined channels would have a bottom width of eight feet minimum.

2.3.3 Freeboard

- For water surface elevations below natural ground, the minimum freeboard from the maximum 100 - year water surface elevation to the surrounding natural ground would be one foot.
- For water surface elevations above natural ground, the minimum freeboard from the maximum 100 - year water surface elevation to the embankment crest elevation would be two feet.

2.3.4 Energy Dissipaters

Energy dissipaters would be designed in accordance with Federal Highway Administration (FHWA) *HEC No. 14 Hydraulic Design of Energy Dissipaters for Culverts and Channels* or the *USBR Hydraulic Design of Stilling Basins and Energy Dissipaters.*

2.3.5 Maintenance Access

As a minimum, one continuous 12 - foot wide maintenance access road would be required along one side of any offsite channel. An access ramp from the maintenance road to the channel bottom would be provided at strategic locations, preferably near the cross roads.

2.4 Onsite Drainage

The criteria summarized below apply to the design of the onsite drainage systems for the WGF and are documented in the ADOT RDG, Chapter 600, Highway Drainage Design (English Unit Equivalencies) May 1996:

- The 10 - year design storm would be used for at - grade and elevated sections of the freeway, crossroad ramps, collector roads and crossroads.

- The 50 - year design storm would be used for the depressed sections of the freeway and crossroad ramps.

- The design hydraulic grade line would be designed to be a minimum of six inches below the elevation of the catch basin grate for the selected design storm.

- For roadways with more than one lane in each direction, the allowable spread criteria, based on the 10 - year storm, would not exceed the combined width of the roadway gutter, shoulder, parking lane and/or distress lane and one - half of the adjacent lane.

- The allowable spread criteria for the 50 - year storm event would not exceed the width of the roadway gutter, shoulder, parking lane and/or distress lane plus the adjacent lane for roadways consisting of more than one lane.

- The allowable ponding or flow depth is dependent upon the type of curb. For Types B and D curb and gutter (ADOT Standard Detail C - 5.10), the allowable depth would be six inches. For a Type C curb and gutter, the allowable depth would be three inches. When barrier or retaining wall is used, the spread criteria typically controls the location of catch basins.

- Inlet capture ratios would comply with Table 606.2 of the RDG.

- Specific restrictions for the various types of inlets as presented in subsection 606.2.13 of the RDG would apply.

- The minimum pipe size used for storm drains would be 24 inches.

- The desirable "self cleaning" velocity would be three feet per second (fps), based on a pipe flowing full, in the design of storm drains. The minimum '"self cleaning" velocity based on a pipe flowing full would be two (2) feet per second.

- The design would provide one 12 - foot dry lane on the crossroad ramps for the design storm.

- The onsite drainage system would be designed to accommodate the current open median and future High Occupancy Vehicle (HOV) and general purpose lanes.

- In general, storm drain trunk lines would be located at a minimum of ten feet outside any future lanes.

The following pipe design criteria as presented in the ADOT *Pipe Selection Guidelines and Procedures* document dated May 1996 would be used:

- Pipe roughness values of 0.012 would be used for all pipes except for non-reinforced cast - in - place concrete pipe (NRCIPCP), which has a pipe roughness value of 0.014.

- Approved pipe types would be reinforced concrete pipe (RCP), non - reinforced concrete pipe (NRCP), NRCIPCP and corrugated high-density polyethylene plastic pipe (CHDPEPP) Class S up to 42 inches in diameter for fills less than ten feet.

ADOT's Drainage Section has provided verbal directive regarding the placement of catch basins along the ramp transitions and the use of curbs on the inside shoulders through roadway super - elevation sections.

- The transition point has been established at 300 feet from the nose of the gore to switch from ramp design criteria to multi - lane design criteria for placement of catch basins.

- The use of ADOT Type C curbs on the inside shoulder along the superelevation sections of the freeway would no longer be required when a ditch is present in the median. Pavement runoff would be allowed to flow overland into the median during the interim period prior to construction of the HOV lanes. This approach has been confirmed by the ADOT Roadway Drainage Section, as well as the ADOT Roadway Plan Review Section.

The criteria presented in the *Urban Drainage Design Manual, Hydraulic Engineering Circular No. 22*, FHWA, November 1996 (HY - 22) would also apply to the WGF.

The following criteria would be used in the selection of the catch basin types within the project limits:

- ADOT standard freeway catch basins (C - 15.91 and C - 15.92) would be used on the freeway mainline and crossroad ramps. Slotted drains would be used to optimize the efficiency of the catch basins.

- ADOT standard curb opening (C - 15.20) Type 3 catch basins would be used on the crossroads for bicycle safety.

- ADOT median catch basins (C - 15.80) would be used in unpaved medians and swales.

There are several key locations where catch basins would be required to maintain safe driving conditions. These would be at the back of gores, the low points in sag vertical curves and at roadway super elevation transitions to limit concentrated flow crossing a travel lane to 0.3 cubic feet per second.

SECTION 3 FEATURES OF PREFERRED ALTERNATIVE

3.1 Overview

The Williams Gateway Corridor is approximately five miles long from the Santan Freeway (202L) to the Maricopa/Pinal County line. A conceptual plan of the preferred alternative is shown in Figure 3. The WGF would begin at the Santan Freeway (202L) in the vicinity of Hawes Road with a freeway to freeway system interchange linking the two freeways. The WGF would extend from the system interchange in a southeast direction traversing between the Williams Gateway Airport and the General Motors (GM) Proving Grounds facility, then turning east along the Frye Road alignment towards the Maricopa/Pinal County line at Meridian Road. The future extension of the WGF from Meridian Road into Pinal County is part of a Corridor Definition Study that is currently being conducted by ADOT. The preferred alternative is shown in more detail in Appendix A.

3.2 Traffic Review

As described above, the WGF would connect to the Santan Freeway (202L) in the vicinity of Hawes Road. A conceptual lane diagram showing the connection of the WGF to the Santan Freeway (202L) is shown in Figure 4. Additional lanes and modifications to the Santan Freeway (202L) would be required within the vicinity of the proposed connection to WGF. This configuration is based on providing two travel lanes on each system interchange ramp; providing a separate approach/departure lane on the mainline for each lane on a system interchange ramp; and dropping one mainline lane per mile departing the system interchange. No traffic operational level of service analysis (LOS) was conducted on the proposed lane configuration shown.

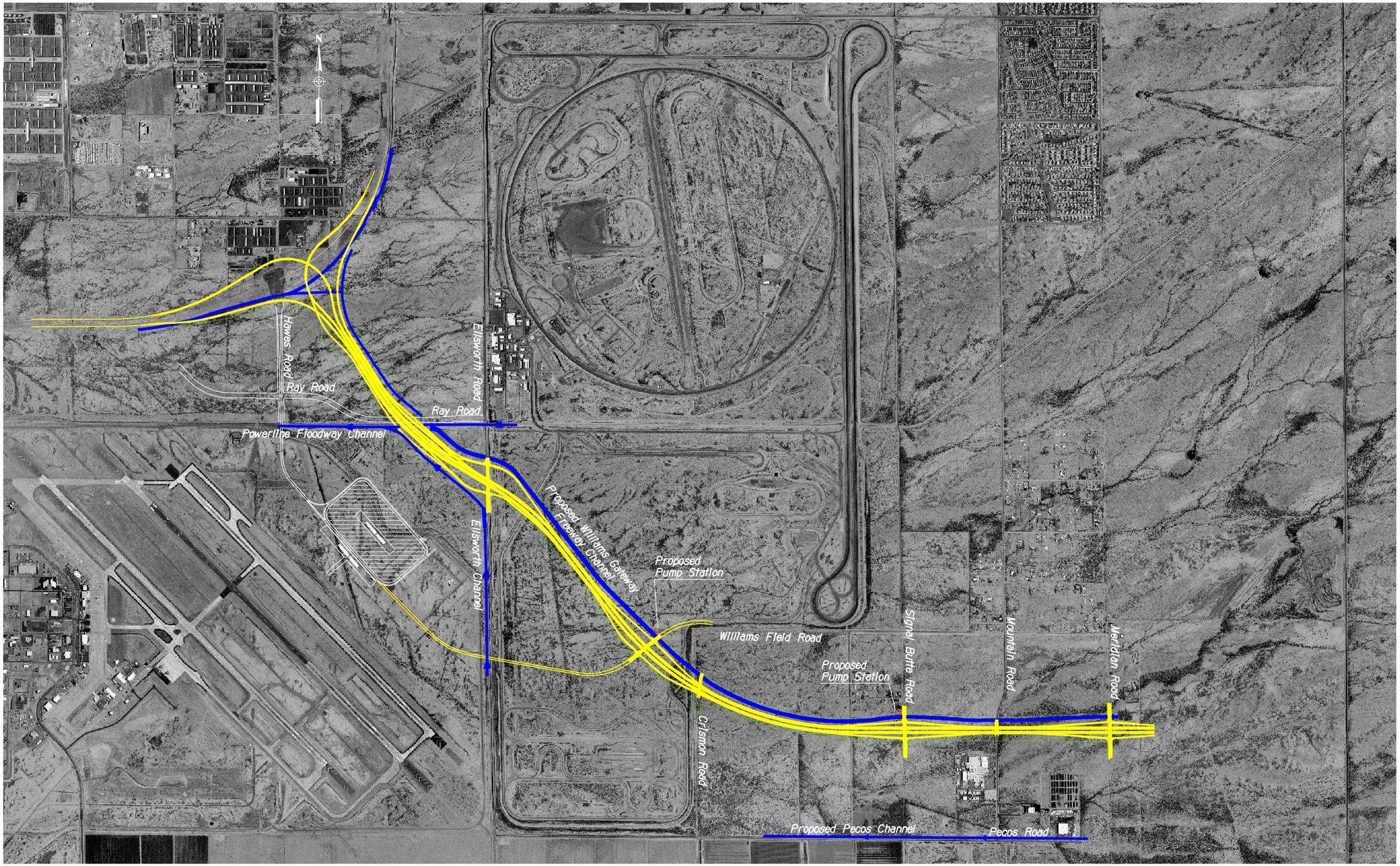


FIGURE 3

CONCEPTUAL ALIGNMENT PLAN

WILLIAMS GATEWAY FREEWAY ALIGNMENT AND ENVIRONMENTAL OVERVIEW STUDY

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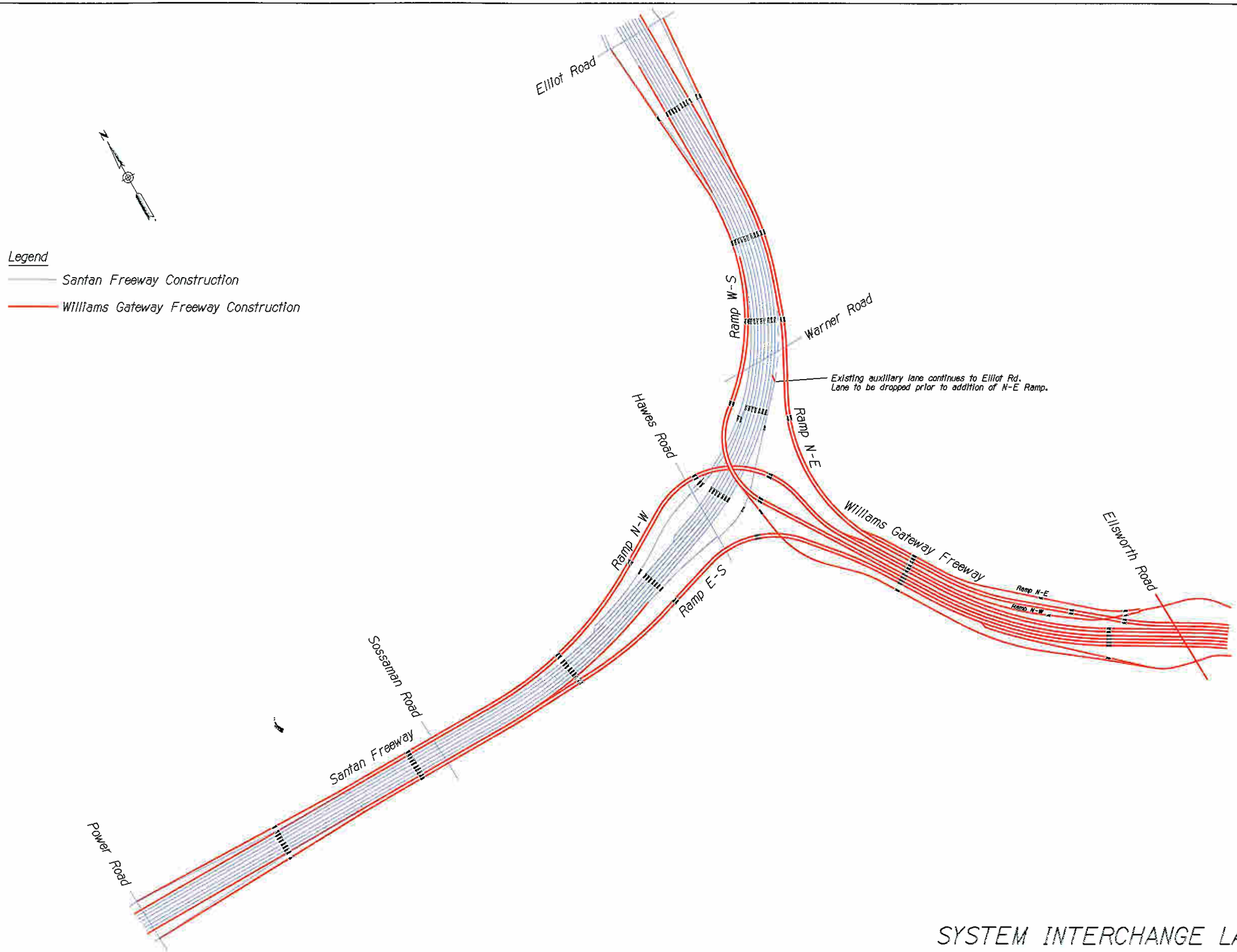

FIGURE 4

SYSTEM INTERCHANGE LANE CONFIGURATION

WILLIAMS GATEWAY FREEWAY ALIGNMENT AND ENVIRONMENTAL OVERVIEW STUDY

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During this study, the inclusion of a full service interchange at Ellsworth Road received support from representatives of the Town of Queen Creek, the City of Mesa, and Maricopa County DOT. The proximity of Ellsworth Road to the system interchange required additional analysis to determine the feasibility of providing a full service interchange at Ellsworth Road. Traffic modeling was conducted by MAG which provided the average daily traffic and peak hour travel demand projections for use in this analysis. Figure 5 shows a conventional service interchange configuration with ramps connecting directly to the WGF. The available weaving distance under this scenario is approximately 2,500 feet between the Ellsworth and system interchange ramps (from nose - of - gore to nose - of - gore). Under this scenario, a driver entering WGF from Ellsworth Road would be required to make two (2) lane changes in order to travel westbound on the Santan Freeway (202L). Under the projected traffic conditions, this weaving movement would operate at an unacceptable LOS of "F" in the 2025 AM Peak Hour.

Figure 6 shows a different service interchange configuration with the westbound WGF system interchange ramp "split" occurring prior to the entrance ramp from Ellsworth Road. This option would remove the weaving conflict described above and would therefore significantly enhance the traffic operational characteristics. This configuration would result in a ramp merge movement in both locations where the Ellsworth Road entrance ramps connect to the westbound WGF. Under the projected traffic conditions, the two ramp merge areas would operate at a desirable LOS "C" or better in the 2025 AM Peak Hour with both of the entrance ramps configured as "parallel" entrances with a minimum of 1,500 feet of acceleration length for entering vehicles. This proposed configuration is depicted in the plans shown in Appendix A.

3.3 Typical Roadway Section

The WGF would consists of three general purpose travel lanes in each direction separated by an open median as shown in Figure 7. Auxiliary lanes would be included between the service interchanges. The typical mainline roadway section would consist of four 12 - foot travel lanes including an auxiliary lane, 10 - foot left and right shoulders, and separated by a 54 - foot open median.

In the future the open median would accommodate one general purpose lane and one HOV lane in each direction separated by a concrete median barrier.

All the directional ramps at the freeway to freeway system interchange will be two-lane ramps. The typical ramp roadway section would consist of two 12 - foot travel lanes, an 8-foot left shoulder, and a 10 - foot right shoulder.

The service interchanges would have three through lanes in each direction based on the City of Mesa street classification. Further traffic analysis will be conducted as part of future planning efforts to determine the need for dual left turn lanes and separate right turn lanes.

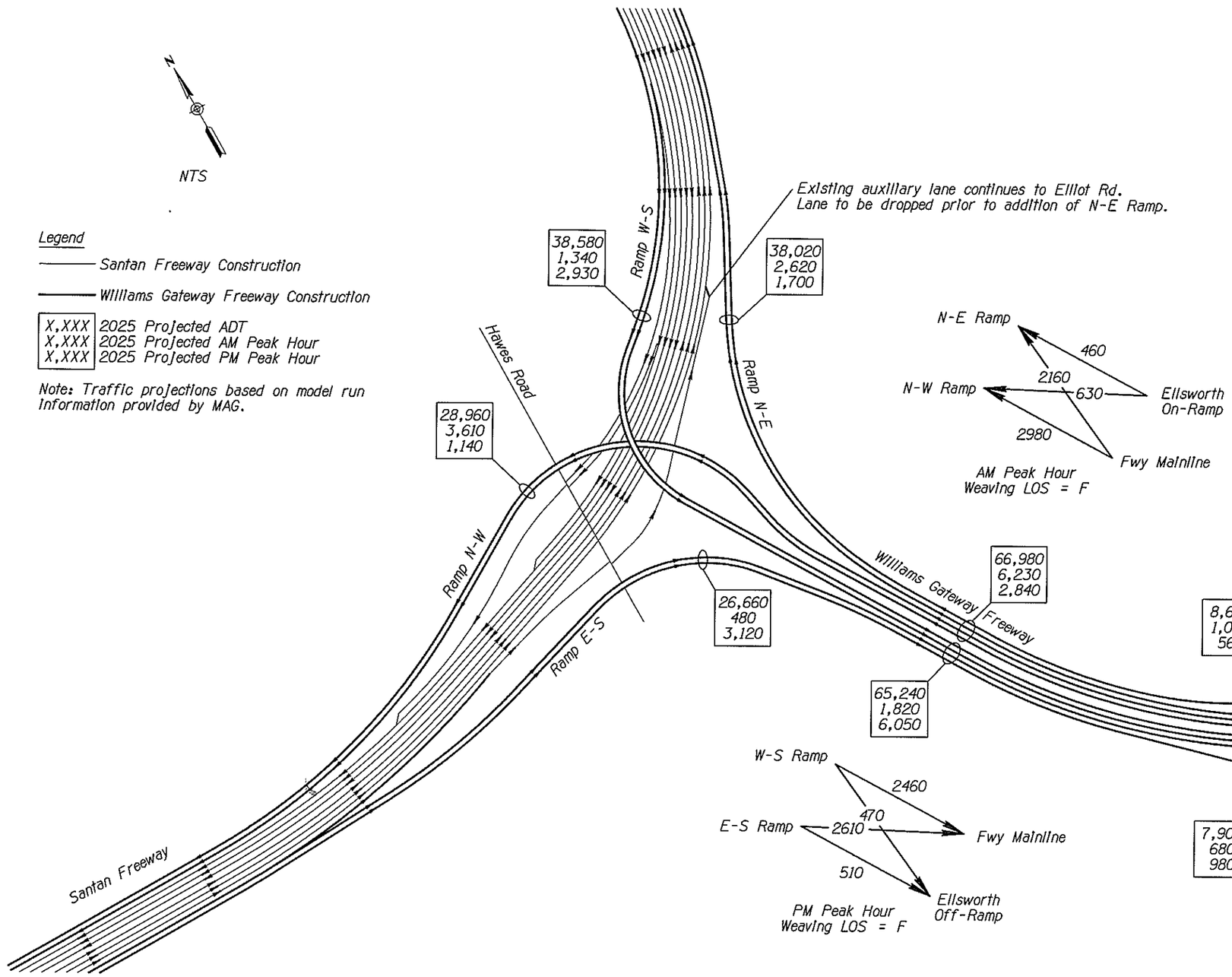

FIGURE 5
ELLSWORTH TI OPTION 1

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NTS

Legend

Santan Freeway Construction

Williams Gateway Freeway Construction

X,XXX	2025 Projected ADT
X,XXX	2025 Projected AM Peak Hour
X,XXX	2025 Projected PM Peak Hour

Note: Traffic projections based on model run information provided by MAG.

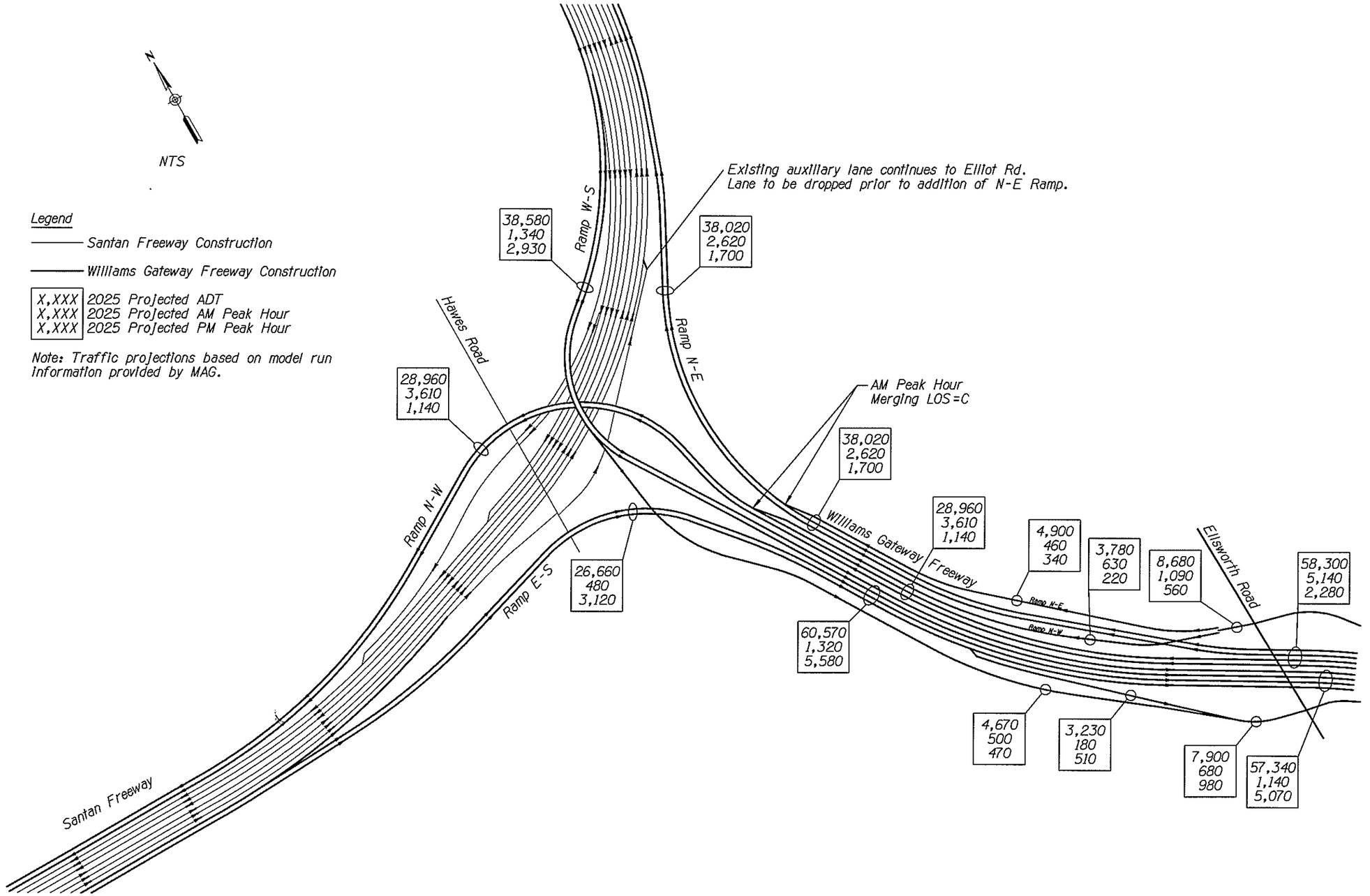

FIGURE 6

ELLSWORTH TI OPTION 2

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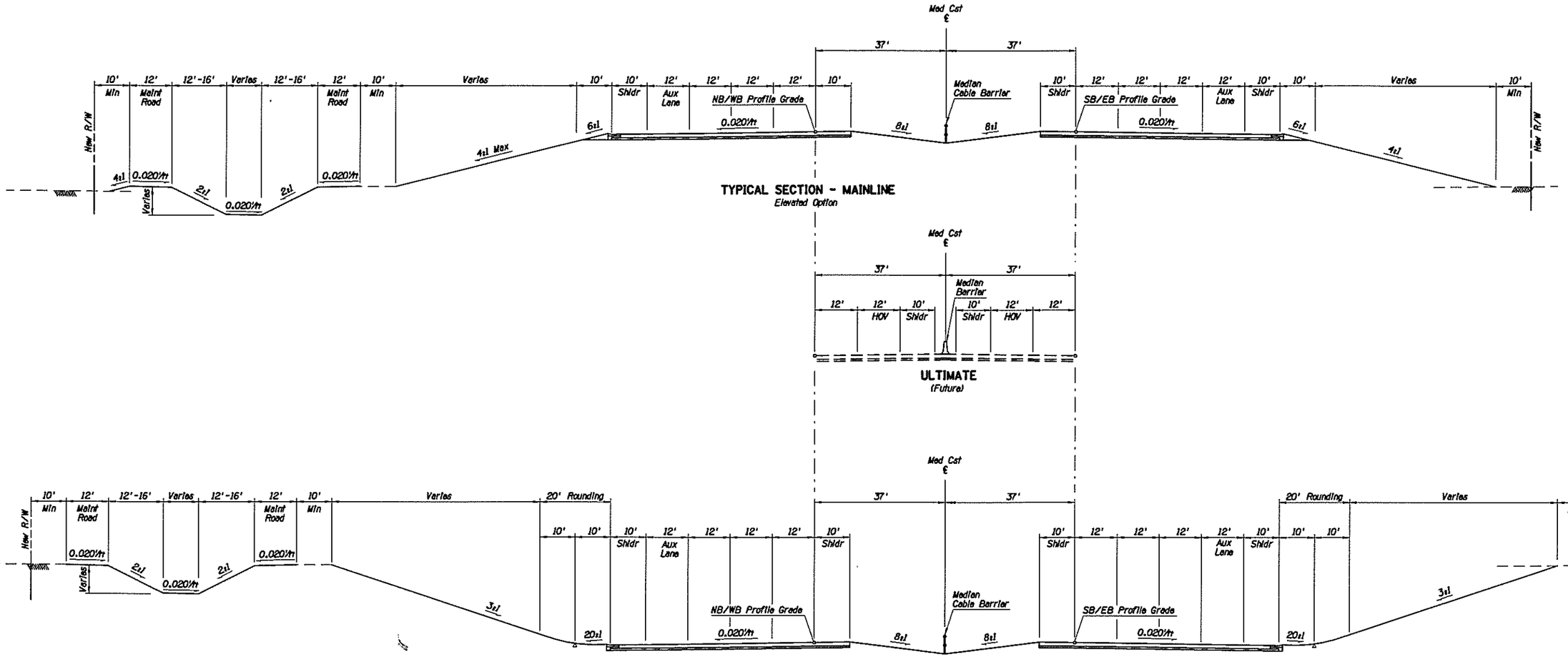

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FIGURE 7
TYPICAL FREEWAY SECTIONS

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3.4 Freeway Geometry

3.4.1 Horizontal Geometry

WGF/Santan System Interchange

The horizontal geometry of the directional ramps connecting to the Santan Freeway (202L) is complicated by the influence of the SR 202L/US60 System Interchange (SuperRedTan) that is approximately three miles north of this location. The complexity of the lane drops necessary to transition the directional ramp lanes from the SuperRedTan into the southbound Santan Freeway (202L) mainline while intermixing with the ramps from the service interchanges created a challenge to the horizontal geometry. Similarly, the addition of lanes onto the northbound Santan Freeway (202L) mainline from the service interchanges also added to the complexity in the design of the WGF/Santan System Interchange. Some modification to the Santan Freeway (202L) would be necessary in order to accommodate the system interchange as shown in Figure 4. The proposed modifications are described in the *Directional Interchange Evaluation for the Santan Freeway (SR202L) at Hawes Road, February 2003 Report* which developed and evaluated a preliminary alignment concept for a directional interchange in the vicinity of Hawes Road and the Santan (SR202L) Freeway. The information from that report was used to develop the WGF/Santan System Interchange in this study.

All the system interchange directional ramps are proposed as two-lane ramps to accommodate future traffic demand. Based on recent history of system interchanges that were built on the regional freeway system, single lane directional ramps have proven to be inadequate in meeting the future traffic demand.

In order to accommodate a full service interchange at Ellsworth Road, the Ellsworth ramps to the north (west) would have to be braided with the WGF ramps as described in Section 3.2.

WGF Mainline

The WGF would cross Ray Road, Ellsworth Road and Crismon Road at a skew angle as it extends in a southeasterly direction from the Santan Freeway (202L). As it continues east of Crismon Road the WGF changes to an east-west direction and crosses Signal Butte Road, Mountain Road and Meridian Road at approximately a 90-degree angle.

3.4.2 Vertical Geometry

It is anticipated that the directional ramps for the WGF/Santan Freeway system interchange would be elevated over the Santan Freeway (202L) and connecting to the WGF. Extending from the system interchange, the WGF would remain elevated over the Powerline Floodway, Ray Road and Ellsworth Road due to their close proximity to each other. East of Ellsworth Road, there are two options for the WGF profile as it continues east to Meridian Road. The first option is to keep the freeway profile elevated the entire length and the second option is to depress the freeway profile between Ellsworth Road and Meridian Road. In both instances, the freeway profile would be a rolling type profile and would go over or under the cross roads while the cross roads remain basically at or near existing grade.

3.5 Arterial Streets

The City of Mesa street system is based on a mile-grid of arterial streets as well as mid-section collector streets. The arterial streets form the backbone of the City's roadway system and are typically four or six lanes wide with ideal traffic signal spacing of not less than one quarter mile. Access to and from the WGF is provided at these major arterial streets via traffic service interchanges. The proposed locations of traffic service interchanges are discussed later in the report. The functional classification for the City of Mesa planned street system is shown in Figure 8.

3.5.1 Access to Williams Gateway Airport

The importance of providing access to the Williams Gateway Airport and to the future passenger terminal is a major consideration of this study. The location of the new passenger terminal is planned at the north-east quadrant of the airport property and the main entrances to this facility would be served by Hawes Road, Ellsworth Road and Williams Field Road. Hawes Road would be the main entrance from the Santan Freeway (202L) via the Hawes Road service interchange. Both Ellsworth Road and Williams Field Road would provide direct access to the new terminal from the WGF via the Ellsworth Road and Williams Field Road service interchanges.

3.6 Traffic Service Interchanges/Grade Separations

Traffic service interchanges would be located at major arterial streets crossings with a minimum spacing of one mile between successive service interchanges, measured along the WGF. Therefore service interchanges are proposed at Ellsworth Road, Williams Field Road, Signal Butte Road and Meridian Road. Grade separations are proposed at Ray Road/Powerline Floodway, Crismon Road and Mountain Road.

An evaluation of different traffic interchange configurations was not performed as part of this study. However, based on recent history of service interchanges built on the regional freeway system, the most common type is a conventional diamond type service interchange. Therefore diamond type service interchanges are proposed for all service interchange along the WGF. A conceptual plan view is shown in Figure 9.

3.6.1 Ray Road/Powerline Floodway

The Powerline Floodway is adjacent and south of Ray Road at this location. The freeway would be elevated over both the Powerline Floodway and Ray Road. A grade separation is proposed over both the Powerline Floodway and Ray Road. The bridge structure would accommodate the ultimate widths of Ray Road and the floodway. A traffic service interchange at Ray Road is not feasible due to its close proximity to the system interchange and Ellsworth Road. The City of Mesa is currently working with a variety of property owners along Ray Road between Power and Ellsworth Roads to establish final alignment, fund and construct Ray Road to full arterial standards. As illustrated on Figure 3, this alignment may not be located on a traditional section line.

Figure 8 City of Mesa Functional Classification

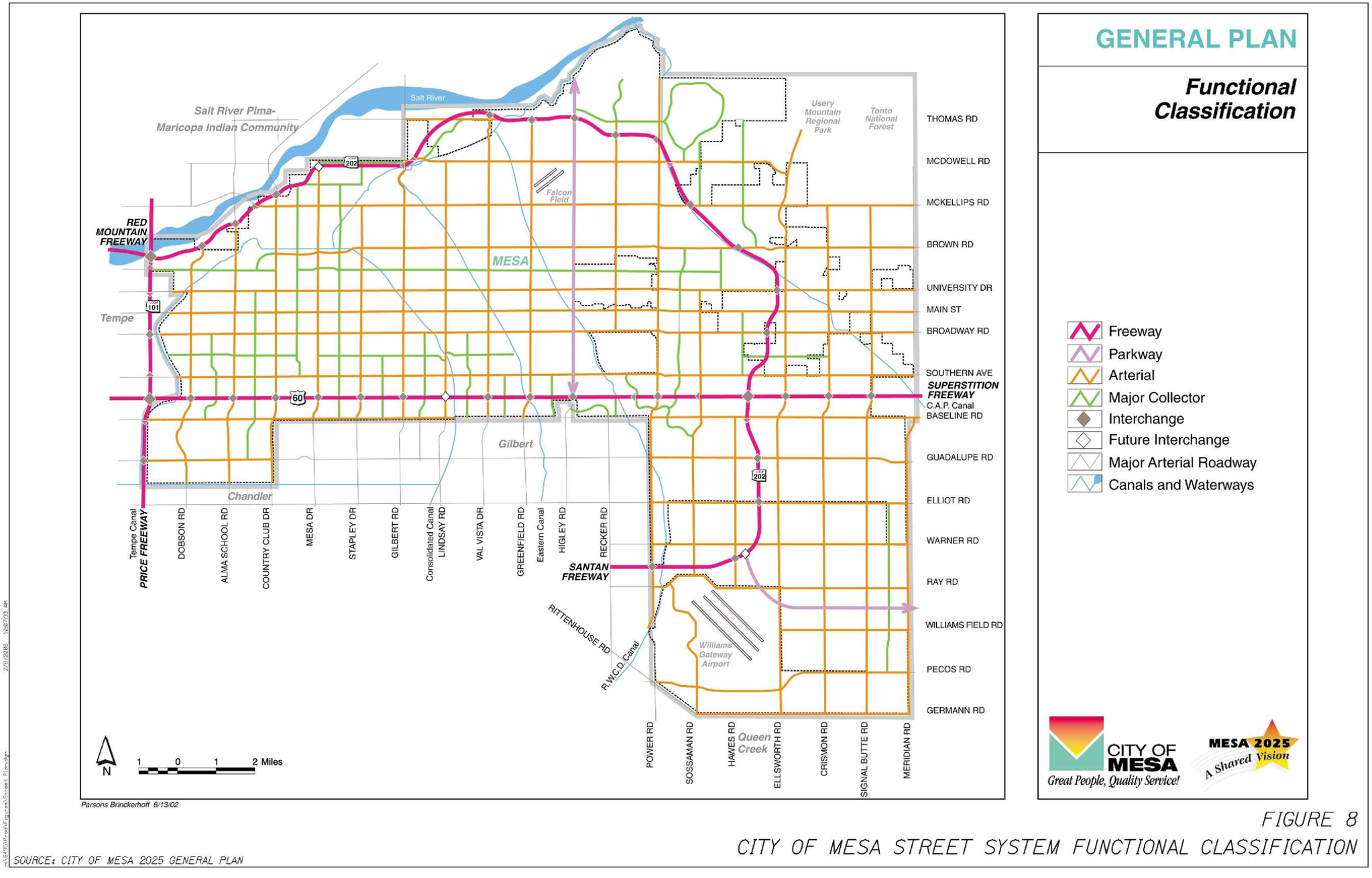

FIGURE 8
CITY OF MESA STREET SYSTEM FUNCTIONAL CLASSIFICATION

SOURCE: CITY OF MESA 2025 GENERAL PLAN

Note:
Configuration shown is based on double left turns and seperate right turns at diamond TI. Actual layout to be determined during the final design of interchanges.

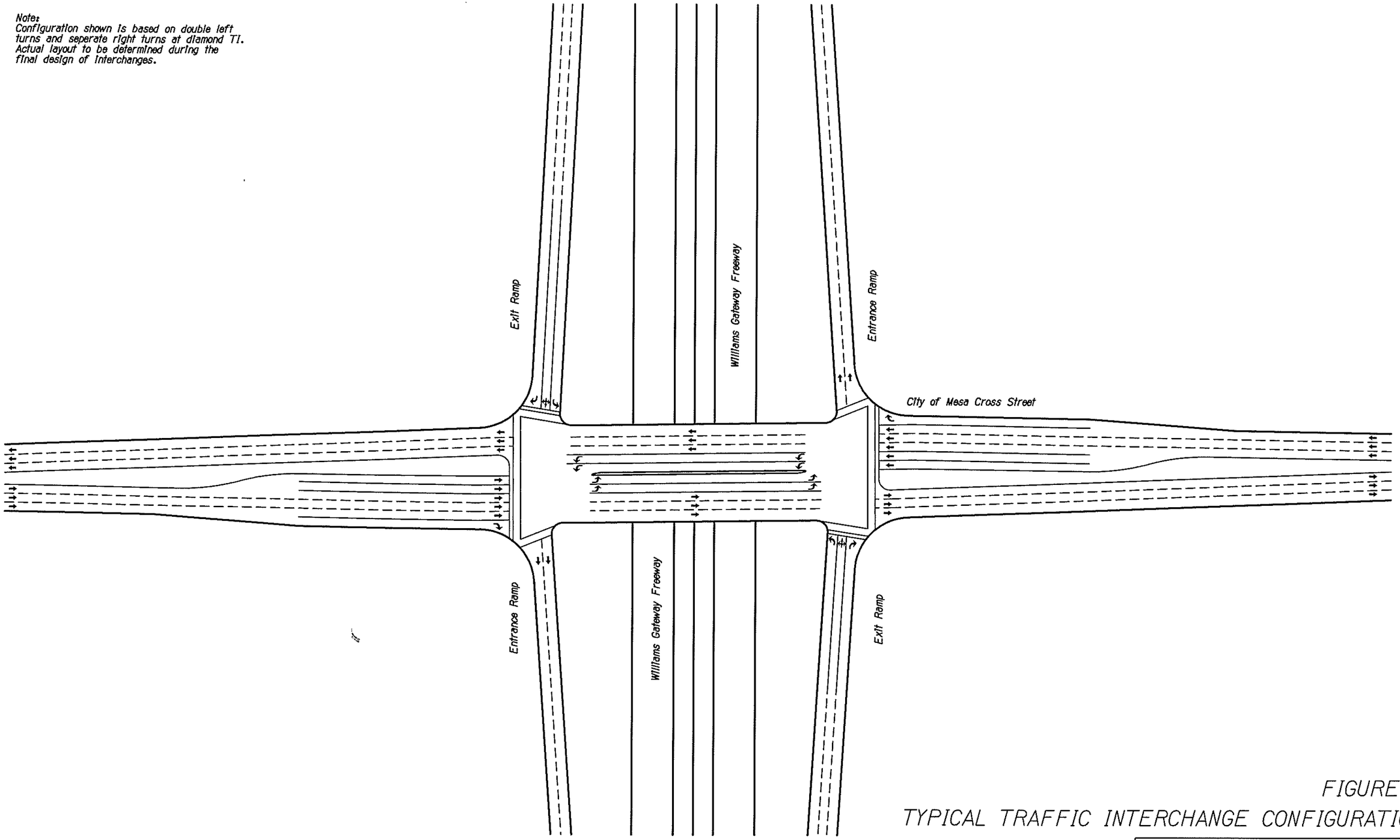

FIGURE 9
TYPICAL TRAFFIC INTERCHANGE CONFIGURATION

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3.6.2 Ellsworth Road

Ellsworth Road is a major arterial road serving the area and is considered the main entrance into the Town of Queen Creek. The importance of a full traffic service interchange at this location is strongly supported by representatives of the Town of Queen Creek, the City of Mesa, and Maricopa County DOT.

The close proximity of the system interchange to Ellsworth Road introduces traffic operational challenges in accommodating a full service interchange as described in Section 3.2. However it has been determined that a full service interchange with the braided ramps on the north (west) side of Ellsworth Road would alleviate the traffic operational weaving deficiencies as described in Section 3.2.

3.6.3 Williams Field Road

A full service traffic interchange is proposed at Williams Field Road. In discussions with representatives from the City of Mesa and the Williams Gateway Airport Authority, the existing Williams Field Road alignment would be realigned to cross the WGF just south of its present alignment and to continue west on a new horizontal alignment to a new signalized intersection with Ellsworth Road. This intersection would serve as one of the main entrances into the future Williams Gateway Airport terminal.

3.6.4 Crismon Road

A grade separation is proposed at Crismon Road. It would not be feasible to provide a traffic service interchange at this location due to its close proximity to the Williams Field Road service interchange. The grade separation would accommodate the ultimate roadway width for Crismon Road which is planned to be a major arterial street.

3.6.5 Signal Butte Road

A full service traffic interchange is proposed at Signal Butte Road which is also planned to be a major arterial street.

3.6.6 Mountain Road

A grade separation is proposed at Mountain Road. The grade separation would accommodate the ultimate roadway width for Mountain Road which is planned to be a major arterial street.

3.6.7 Meridian Road

A full service traffic interchange is proposed at Meridian Road which is planned to be a major arterial street.

3.7 Structures

In recent history the design and construction of bridges for the regional freeway system has produced a knowledge base of economical and constructible bridge configurations for typical overpass/underpass structures. The two types of bridges commonly used are cast-in-place post-tensioned concrete box girders and standard precast-prestressed concrete AASHTO girders. Post-tensioned box girders can accommodate relatively long spans and variable

geometrics when compared to precast concrete girders. Precast systems offer a construction advantage when working over traffic due to the lack of falsework constraints. Steel girder bridges have not been found to be cost competitive for the typical overpass/underpass applications. Therefore cast-in-place post-tensioned concrete box girder and precast-prestressed concrete girder bridges are proposed for all bridge structures along WGF.

3.8 Drainage

3.8.1 Offsite Drainage System

The WGF is located in eastern Maricopa County and western Pinal County. The land in this area drains generally from east - northeast to west - southwest with typical slopes of about 0.5 percent. Just west of Meridian Road, the freeway alignment intercepts a large unnamed wash, which is the main source of offsite flow that would be intercepted by the freeway. The upstream watershed limit is the Central Arizona Project Canal, which is located approximately 3 miles northeast of the location where the WGF intersects Meridian Road.

The watershed that drains towards the proposed freeway has been studied by the Flood Control District of Maricopa County (FCDMC) in the East Mesa Area Drainage Master Plan (ADMP). In that study, a HEC-1 model was developed for the entire East Mesa area. This model has been modified several times since the original study. One modification was done as part of the design of the Maricopa County Department of Transportation's Ellsworth Road Channel. Other modifications were done by the FCDMC subsequent to the Ellsworth Road project in conjunction with other FCDMC projects in the area. Those modifications included revisions to reflect recent development in the watershed and to model future development.

The model used for this study of the WGF is based on the most recent future conditions model available from the FCDMC. The WGF project team made several additional revisions to that model based on a meeting with the FCDMC on November 14, 2005. In that meeting, the FCDMC indicated that two proposed detention basins described in the East Mesa ADMP will not be built because they are located outside Maricopa County. These basins were removed from the HEC-1 model.

In addition, the FCDMC's modified ADMP model included flow routing based on a proposed Pecos Channel, located along the north side of Pecos Road. In the November 14, 2005 meeting, representatives from the FCDMC and the study team discussed the possibility of merging the WGF offsite channel with the FCDMC's Pecos Road Channel in a cooperative cost-sharing effort between ADOT and FCDMC.

The proposed offsite drainage system for the WGF would consist of a concrete lined collector channel along the north/east side of the freeway. The channel would collect overland flow that will be intercepted by the freeway and would also carry the onsite flows from the freeway. The channel would vary in depth from 6 to 8 feet with a bottom width varying from 30 to 40 feet. The side slopes would be 2:1. At locations where the channel crosses arterial streets, box culverts varying in size from 5-barrel 10' x 6' to 5-barrel 12' x 6' would be required. The WGF channel would cross the freeway just south of Ray Road, where it would accept flows from the existing Powerline Floodway. The combined WGF/Powerline Floodway channel would flow westward along the existing Powerline Floodway (Ray Road) alignment to the Hawes Road alignment, to the Ellsworth Channel confluence.

The current Ellsworth Channel alignment follows roughly the Williams Gateway Airport perimeter road. It is proposed that the Ellsworth Channel be relocated outside the airport property, adjacent to the WGF southbound Ellsworth Road exit ramp. This would provide additional developable land within the Williams Gateway Airport property.

A short channel would be needed north of Ray Road on the east side of the freeway to collect overland flows originating west of the General Motors Proving Grounds east of Ellsworth Road and the WGF. This channel would cross the WGF and would discharge into the Santan Freeway channel just west of the system interchange.

The proposed WGF offsite channel would intercept most of the overland flow that the Ellsworth Road channel was designed to intercept and carry. As a result, the Ellsworth Road channel would be oversized after the WGF channel is built.

3.8.2 Onsite Drainage System

The onsite drainage system is designed to collect and convey both the on and off-road flows originating within the new right-of-way corridor. The off - road catch basins connect to storm drain laterals that convey the flows either to the offsite collector channel or to a new storm drain trunk line.

In anticipation of the future HOV and general purpose lanes construction in the median of the WGF, the storm drain laterals would be designed to accommodate future flows from the HOV and general purpose lanes. In the interim condition, ADOT C-15.80 median catch basins would be located in the open median where ditches are present. The interim median inlets would be offset slightly from the median construction centerline so that when the ultimate HOV and general purpose lanes are constructed, ADOT C-15.92 inlets could be built by modifying the C - 15.80 inlets.

The location of the new storm drain trunk line would be set behind the ultimate proposed gutter to account for the future mainline widening.

At the Signal Butte Road and Williams Field Road service interchanges, pump stations would be needed to drain the freeway in the depressed freeway scenario. The pump stations would discharge into the offsite collector channel, and would have a peak inflow of approximately 300 cfs in the 50 - year event.

In the elevated freeway scenario, all onsite drainage could be discharged directly into the offsite collector channel through storm drain laterals.

3.9 Utilities

The results of a review of existing utility maps, Blue Stakes records and City of Mesa planning documents are summarized in the following table 3-1, which includes a list of the existing and proposed utilities and their ownership within the project limits.

The extent of utility conflicts would depend primarily on the profile of the WGF. The depressed freeway profile would result in the most utility conflicts as opposed to an elevated freeway profile.

Table 3-1 Utilities

Cross Street	Existing / Future Utilities	Utility Owner
Hawes Road	Future 12" and 30" water line along Hawes Road across the Santan Freeway corridor and plugs installed at 202L crossing	City of Mesa
Warner Road	Existing 12kV and 69kV overhead power lines along Warner Road across the Santan Freeway corridor	SRP
	Existing underground telephone lines	Qwest
	Future 12" water line (202L to west)	City of Mesa
	Existing 12" waterline (202L to Ellsworth)	City of Mesa
	Future 18" sanitary sewer and plugs installed at 202L crossing	City of Mesa
Ray Road	Future 20" water line	City of Mesa
	Future 24" sanitary sewer	City of Mesa
Ellsworth Road	Existing 16" water line	City of Mesa
	Future 20" water line	City of Mesa
	Existing 10" Sewer force main	City of Mesa
	Future 21" sanitary sewer	City of Mesa
Williams Field Road	Future 16" water line	City of Mesa
	Future 21" sanitary sewer	City of Mesa
Crismon Road	Future 24" water line	City of Mesa
Signal Butte Road	Future 12" water line	City of Mesa
	Future 10" sanitary sewer	City of Mesa
Mountain Road	Existing 16" water line	City of Mesa
	Existing 12" sewer line	City of Mesa

3.10 Right-of-Way

The right - of - way that is needed for the proposed WGF consists of parcels of land that are primarily under private ownerships. At the present time much of the land along the proposed freeway corridor is largely undeveloped desert. Development in the area is limited to a few commercial developments and residences. The commercial parcels include the General Motors Proving Grounds, Fuji Film and Landstar Polymer. The residential area consists of 4-8 residences located between 222nd Street and Mountain Road.

The southern portion of the General Motors Proving Grounds property that would be impacted by the preferred freeway corridor has been sold to a private party (Levine) who plans to develop the property at a later date. During the study phase the project team met with the major property owners and businesses along the preferred freeway corridor to inform these stakeholders of the proposed features of the freeway and to minimize the impacts to their planned and current operations.

The western end of the proposed freeway corridor is within the jurisdiction of the City of Mesa. The Mesa boundary also encompasses a portion of the proposed corridor near the eastern end of the project from Signal Butte Road to Meridian Road. The central portion of the proposed corridor which includes the General Motors Proving Grounds is within the jurisdiction of Maricopa County. Ultimately the entire WGF will be located within the incorporated City of Mesa, as the proposed alignment lies fully within the Mesa Municipal Planning Area (MPA).

The estimated right-of-way required for the preferred freeway corridor is summarized in Table 3 - 2.

Table 3-2 Right-of-Way

#	Parcel #	Parcel Owner	Approximate Current Parcel *(SqFt)	Approximate Current Parcel (Acre)	Approximate Parcel Take *(SqFt)	Approximate Parcel Take (Acre)
1	304-31-009-U	Van Rijn Dairy	1003772.00	23.04	0.00	0.00
2	304-31-009-N	Van Rijn Jody	108087.00	2.48	0.00	0.00
3	304-31-009-R	Alilaur LLC	2770647.00	63.61	697454.00	16.01
4	304-31-009-S	202 Holdings	820418.50	18.83	681072.00	15.64
5	304-31-009-K	ADOT	195983.74	4.50	195984.00	4.50
6	304-31-009-G	ADOT	65008.68	1.49	65009.00	1.49
7	304-31-008-A	202 Holdings	3501906.00	80.39	1334503.00	30.64
8	304-31-008-B	202 Holdings	2201082.44	50.53	507693.00	11.66
9	304-31-011-B	Mormino Anthony J	696540.34	15.99	426166.00	9.78
10	304-31-010-C	Grupo Aztex Ltd Ltd	605155.55	13.89	0.00	0.00
11	304-31-010-D	Mushson Partners LLC	411569.00	9.45	0.00	0.00
12	304-31-010-E	Mushson Partners LLC	410932.50	9.43	0.00	0.00
13	304-31-011-C	Mesa Gateway Enterprises LLC	1711683.50	39.29	158209.00	3.63
14	304-31-010-G	Sumac Enterprises Ltd Partnership	1266711.00	29.08	0.00	0.00
15	304-31-010-F	Mormino Investments Ltd Partnership	1268660.00	29.12	0.00	0.00
16	304-31-009-T	202 Holdings	17065.82	0.39	17066.00	0.39
30	304-35-016-A	Williams Gateway Airport Authority	551662.23	12.66	0.00	0.00
31	304-35-011-D	Williams-Gateway Airpark LLC	93733.80	2.15	0.00	0.00
32	304-35-011-F	Williams Gateway Airport Authority	2223725.44	51.05	906.00	0.02
33	304-35-011-E	Williams-Gateway Airpark LLC	595394.46	13.67	595394.40	13.67
34	304-35-013-A	Williams-Gateway Airpark LLC	1425285.00	32.72	895392.00	20.56
35	304-35-012-A	Williams-Gateway Airpark LLC	1602146.28	36.78	895057.00	20.55
40	304-35-004-C	Pacific Proving LLC	27308217.49	626.91	3581263.00	82.21
41	304-35-003-G	Pacific Proving LLC	56355.07	1.29	0.00	0.00
50	304-35-028-A	Pacific Proving LLC	27139828.28	623.04	1841530.00	42.28
60	304-34-014-A	Pacific Proving LLC	17037041.76	391.12	2054129.00	47.16
61	304-34-015-B	Tucker Properties Ltd	3368108.93	77.32	112544.00	2.58
62	304-34-016-G	Naegeli Bruce A	1658554.51	38.08	227649.00	5.23
63	304-34-204	Hanson Larry R/Pamela	441671.38	10.14	293706.00	6.74
64	304-34-017-X	Hanson Larry R/Pamela	405195.00	9.30	332738.00	7.64

#	Parcel #	Parcel Owner	Approximate Current Parcel *(SqFt)	Approximate Current Parcel (Acre)	Approximate Parcel Take *(SqFt)	Approximate Parcel Take (Acre)
65	304-34-205	Libbey Joseph H/Willie M	220704.47	5.07	0.00	0.00
66	304-34-025-A	Stringham Cindy L	100983.50	2.32	0.00	0.00
67	304-34-025-F	Ferguson Terry	54774.00	1.26	0.00	0.00
68	304-34-025-E	De Anda Alejandro/Maricela	46359.00	1.06	0.00	0.00
70	304-34-019-F	Thompson William W & Judith A	217011.00	4.98	0.00	0.00
71	304-34-019-K	Kitchukov Todor	435572.00	10.00	131661.00	3.02
72	304-34-019-L	Giordano Charles/Kathleen Etal	207634.00	4.77	101963.00	2.34
73	304-34-019-Q	Gustafson Susie D & Kelly & Kristy	68949.00	1.58	0.00	0.00
74	304-34-019-R	Gustafson Susie D & Kelly & Kristy	69384.00	1.59	0.00	0.00
75	304-34-019-S	Gustafson Victor Gary	69386.00	1.59	0.00	0.00
76	304-34-041	Fujifilm Electronic Materials USA Inc	428990.00	9.85	263230.00	6.04
77	304-34-042-B	Fujifilm Electronic Materials USA Inc	318730.35	7.32	240736.00	5.53
78	304-34-020-M	Bawolek Edward J/Susan J Tr	1030451.50	23.66	492810.00	11.31
79	304-34-057	Viewpoint Resort LC	4311795.02	98.99	1034911.00	23.76
80	304-34-021-N	Demuro Properties	765173.50	17.57	102033.00	2.34
81	304-34-021-R	Demuro Eugene Tr/Baldelli Joseph	206908.00	4.75	95184.00	2.19
82	304-34-021-S	Schuerman Michael G	207070.50	4.75	0.00	0.00
83	304-34-203	G M 50 LLC	1121039.65	25.74	126072.00	2.89
84	304-34-202	Am-Safe Inc	932770.00	21.41	137340.00	3.15
85	304-34-056	Am-Safe Inc	651027.00	14.95	108004.00	2.48
86	304-34-021-P	Dancer Rick L	215275.51	4.94	215275.51	4.94
87	304-34-021-Q	Demuro Arthur/Susan	207047.50	4.75	207047.50	4.75
88	304-34-042-A	Fujifilm Electronic Materials USA Inc	77341.00	1.78	0.00	0.00
89	304-34-005-C	Pacific Proving LLC	5071424.65	116.42	0.00	0.00
90	304-34-005D	General Motors Corporation	22792540.04	523.24	0.00	0.00
91	304-30-024-E	202 Holdings	448051.00	10.29	282811.03	6.49
92	304-30-025-C	ADOT	927087.00	21.28	105846.00	2.43
93	304-30-025-A	202 Holdings	1640819.00	37.67	0.00	0.00
94	304-30-025-D	ADOT	416264.00	9.56	32022.00	0.74
95	304-30-025-E	Mimark Investments LLC	385024.00	8.84	12598.00	0.29
		TOTAL				**427**

***Current Parcel Area and Parcel Takes Area Calculated using MicroStation (Parcels.dgn)**

SECTION 4 COST ESTIMATES

Planning level cost estimates were developed for both the elevated (Table 4 - 1) and depressed (Table 4 - 2) freeway options.

The planning level cost estimates are based on 2004 costs and include costs for design, construction management, and right-of-way. The probable cost estimate for an elevated facility totals $292 million, while the estimate for a depressed facility totals $273 million.

Table 4-1 Probable Cost Estimate (Elevated)

Item	Unit	Quantity	Unit Price	Amount
Earthwork - Borrow	Cu.Yd.	3,261,395	5.00	16,306,976
Portland Cement Concrete Pavement (Mainline)	Sq.Yd.	323,601	50.00	16,180,066
Portland Cement Concrete Pavement (Ramps & Crossroads)	Sq.Yd.	207,462	50.00	10,373,084
ARFC Overlay (1 inch)	Sq.Yd.	396,315	4.00	1,585,262
Concrete Median Barrier	L.Ft.	2,287	80.00	182,920
Concrete Half Barrier	L.Ft.	1,085	45.00	48,825
Cable Barrier	L.Ft.	21,739	30.00	652,181
Concrete Curb & Gutter, ADOT Std C-05.10, Type B or C	L.Ft.	164,201	15.00	2,463,016
Concrete Curb & Gutter, ADOT Std C-05.10, Type D	L.Ft.	11,796	12.00	141,551
Structures	Sq.Ft.	680,847	90.00	61,276,230
Wall Structures	Sq.Ft.	114,865	55.00	6,317,575
Concrete Catchbasin (C-15.92)	Each	435	2,500.00	1,087,500
Manhole (C-18.10)	Each	50	2,500.00	125,000
24" Storm Drain Pipe	L.Ft.	38,000	45.00	1,710,000
Concrete Channel Lining	Sq.Yd.	236,100	30.00	7,083,000
Channel Excavation	Cu.Yd.	414,800	5.00	2,074,000
5-Barrel 10'x6' Box Culverts	L.Ft.	400	2,800.00	1,120,000
5-Barrel 12'x6' Box Culverts	L.Ft.	600	3,200.00	1,920,000
Pavement Marking (White Thermoplastic)(0.060")	L.Ft.	392,211	0.30	117,663
Pavement Marking (Yellow Thermoplastic)(0.060")	L.Ft.	149,325	0.30	44,798
Pavement Symbol (Extruded Thermoplastic (0.090")	Each	184	150.00	27,600
Pavement Marker, Raised, Type C or G	Each	7,052	2.00	14,104
Bridge Sign Structure (Type F)	Each	12	25,000.00	300,000
Cantilever Sign Structure (Type C)	Each	12	15,000.00	180,000
Foundation for Sign Structure	Each	36	5,000.00	180,000
Extruded Alum Sign Panel with Type III/IV Sheet	Sq.Ft.	7,200	22.00	158,400
Improvements/Modifications to Santan Signing	L.Sum	1	300,000.00	300,000
Other Mainline Sign Panels, Posts, and Foundations	L.Sum	1	15,000.00	15,000
Crossroad Interchange Signing	Each	4	20,000.00	80,000
Traffic Signal, Full Intersection	Each	8	110,000.00	880,000
FMS Conduit Bank (3) 3"	L.Ft.	52,200	25.00	1,305,000
Pullbox, #7	Each	65	500.00	32,625
Pullbox, #9	Each	33	2,000.00	65,250
Loop Detectors, 6x6	Each	30	400.00	12,000
Light Pole (Type U)(69')	Each	360	3,000.00	1,079,714
Light Pole Foundation	Each	360	2,500.00	899,762
Conductors	L.Ft.	640,500	0.50	320,250
Electrical Conduit	L.Ft.	128,100	6.00	768,600
Pullbox, #5	Each	360	400.00	144,000
Pullbox, #7 with Extension	Each	5	500.00	2,500
Luminaire (High Mast)(HPS 400 Watt)	Each	360	600.00	215,943
Load Center Cabinet and Foundation	Each	5	5,000.00	25,000
SUBTOTAL - CONSTRUCTION ITEMS				**$137,815,395**
Maintenance and Protection of Traffic		5%		6,890,770
Dust and Water Palliative		2%		2,756,308
Quality Control		2%		2,756,308
Construction Surveying		4%		5,512,616
Erosion Control		1%		1,378,154
Mobilization (8% of all construction items above)		8%		12,568,764
SUBTOTAL CONSTRUCTION ITEMS:				**$169,678,314**
Unidentified Items		20%		33,935,663
TOTAL CONSTRUCTION COST:				**$203,613,977**
Construction Engineering		14%		28,505,957
Engineering Design (includes surveying and geotechnical)		8%		16,289,118
PCCP Quality Incentive ($1.50/Sq.Yd.)				207,000
ARAC Smoothness Incentive ($11,000/lane mile)				110,000
Right-of-Way				42,700,000
Utility Relocation				1,000,000
TOTAL PROJECT COST:				**$292,426,052**

Table 4-2 Probable Cost Estimate (Depressed)

TABLE XX - ESTIMATE OF PROBABLE COST
WILLIAMS GATEWAY CORRIDOR - DEPRESSED
SANTAN, 202L TO MERIDIAN ROAD

TRACS No.: H6878 01L
Project Description: Williams Gateway Corridor - Depressed

	Unit	Quantity	Unit Price	Amount
Earthwork - Borrow	Cu.Yd.	370,736	5.00	1,853,680
Portland Cement Concrete Pavement (Mainline)	Sq.Yd.	323,601	50.00	16,180,066
Portland Cement Concrete Pavement (Ramps & Crossroads)	Sq.Yd.	207,462	50.00	10,373,084
ARFC Overlay (1 inch)	Sq.Yd.	396,315	4.00	1,585,262
Concrete Median Barrier	L.Ft.	2,287	80.00	182,920
Concrete Half Barrier	L.Ft.	1,085	45.00	48,825
Cable Barrier	L.Ft.	21,739	30.00	652,181
Concrete Curb & Gutter, ADOT Std C-05.10, Type B or C	L.Ft.	164,201	15.00	2,463,016
Concrete Curb & Gutter, ADOT Std C-05.10, Type D	L.Ft.	11,796	12.00	141,551
Structures	Sq.Ft.	570,837	90.00	51,375,320
Wall Structures	Sq.Ft.	114,865	55.00	6,317,575
Concrete Catchbasin (C-15.92)	Each	435	2,500.00	1,087,500
Manhole (C-18.10)	Each	50	2,500.00	125,000
24" Storm Drain Pipe	L.Ft.	20,500	45.00	922,500
36" Storm Drain Pipe	L.Ft.	1,700	70.00	119,000
42" Storm Drain Pipe	L.Ft.	1,800	85.00	153,000
54" Storm Drain Pipe	L.Ft.	5,400	130.00	702,000
60" Storm Drain Pipe	L.Ft.	4,150	160.00	664,000
78" Storm Drain Pipe	L.Ft.	2,500	170.00	425,000
Concrete Channel Lining	Sq.Yd.	236,100	30.00	7,083,000
Channel Excavation	Cu.Yd.	414,800	5.00	2,074,000
5-Barrel 10'x6' Box Culverts	L.Ft.	400	2,800.00	1,120,000
5-Barrel 12'x6' Box Culverts	L.Ft.	600	3,200.00	1,920,000
Pump Stations (300 cfs peak inflow)	Each	2	6,000,000.00	12,000,000
Pavement Marking (White Thermoplastic)(0.060")	L.Ft.	392,211	0.30	117,663
Pavement Marking (Yellow Thermoplastic)(0.060")	L.Ft.	149,325	0.30	44,798
Pavement Symbol (Extruded Thermoplastic (0.090")	Each	184	150.00	27,600
Pavement Marker, Raised, Type C or G	Each	7,052	2.00	14,104
Bridge Sign Structure (Type F)	Each	12	25,000.00	300,000
Cantilever Sign Structure (Type C)	Each	12	15,000.00	180,000
Foundation for Sign Structure	Each	36	5,000.00	180,000
Extruded Alum Sign Panel with Type III/IV Sheet	Sq.Ft.	7,200	22.00	158,400
Improvements/Modifications to Santan Signing	L.Sum	1	300,000.00	300,000
Other Sign Panels, Posts, and Foundations	L.Sum	1	15,000.00	15,000
Crossroad Interchange Signing	Each	4	20,000.00	80,000
Traffic Signal, Full Intersection	Each	8	110,000.00	880,000
FMS Conduit Bank (3) 3"	L.Ft.	52,200	25.00	1,305,000
Pullbox, #7	Each	65	500.00	32,625
Pullbox, #9	Each	33	2,000.00	65,250
Loop Detectors, 6x6	Each	30	400.00	12,000
Light Pole (Type U)(69')	Each	360	3,000.00	1,079,714
Light Pole Foundation	Each	360	2,500.00	899,762
Conductors	L.Ft.	640,500	0.50	320,250
Electrical Conduit	L.Ft.	128,100	6.00	768,600
Pullbox, #5	Each	360	400.00	144,000
Pullbox, #7 with Extension	Each	5	500.00	2,500
Luminaire (High Mast)(HPS 400 Watt)	Each	360	600.00	215,943
Load Center Cabinet and Foundation	Each	5	5,000.00	25,000
SUBTOTAL - CONSTRUCTION ITEMS				**$126,736,690**
Maintenance and Protection of Traffic		5%		6,336,834
Dust and Water Palliative		2%		2,534,734
Quality Control		2%		2,534,734
Construction Surveying		4%		5,069,468
Erosion Control		1%		1,267,367
Mobilization (8% of all construction items above)		8%		11,558,386
SUBTOTAL CONSTRUCTION ITEMS:				**$156,038,212**
Unidentified Items		20%		31,207,642
TOTAL CONSTRUCTION COST:				**$187,245,855**
Construction Engineering		14%		26,214,420
Engineering Design (includes surveying and geotechnical)		8%		14,979,668
PCCP Quality Incentive ($1.50/Sq.Yd.)				207,000
ARAC Smoothness Incentive ($11,000/lane mile)				110,000
Right-of-Way ($100,000/arce)				42,700,000
Utility Relocation				1,600,000
TOTAL PROJECT COST:				**$273,056,943**

SECTION 5 FUTURE CONSIDERATIONS

While the study area is predominately vacant desert land at the present time, this area is experiencing enormous development pressure for planned commercial and residential development. The preliminary freeway alignment and major freeway features developed in this study are intended to help guide stakeholders in their development planning.

The City of Mesa representatives have expressed the City's preference for a depressed freeway option in lieu of an elevated facility. The freeway would be depressed below existing ground from east of Ellsworth Road to Meridian Road and would have less of a visual impact to the surrounding area. Based on the planning level cost estimates developed in this study, the depressed freeway option is approximately 6.5% ($19 million) lower than the elevated facility.

5.1 Future Developments

A number of potential new developments that are being planned in the study area are listed in Table 5 - 1.

Table 5-1 Planned Study Area Commercial/Residential Developments

Name	Location
Signal Butte 10	Residential development north of the freeway alignment on Signal Butte Road.
Keighley Place	Residential development north of the freeway alignment on Meridian Road.
Williams Gateway Center	Commercial property at southwest corner of Ray Road and Ellsworth Road.
Kitchell Development	Multiuse development at Hawes and Santan Freeway (202L).
Gila River Ranches	Residential development north of the freeway alignment on Meridian Road.
Mountain Horizons	Residential development near Ray Road and Ellsworth Road.
Dream Catchers	Commercial development on northwest corner of Pecos and Mountain Roads.
Jade Grading	Commercial property on Pecos Road.
Amsafe	Commercial property north of Pecos Road along Mountain Road.
Chas Roberts Air Conditioning	Commercial property south of the freeway alignment on Germann Road and Hawes Road.
Gateway Airport Commerce Park	Commercial development south of the freeway alignment on Ellsworth Road and Hawes Road
Aircom Industrial Park	Commercial development south of freeway alignment on Ellsworth Road and Pecos Road.
Viawest	Commercial development north of the freeway alignment at Warner Road and Ellsworth Road.
GM Proving Grounds	Residential development north of the freeway alignment. Commercial development south of freeway alignment

5.2 Extension into Pinal County

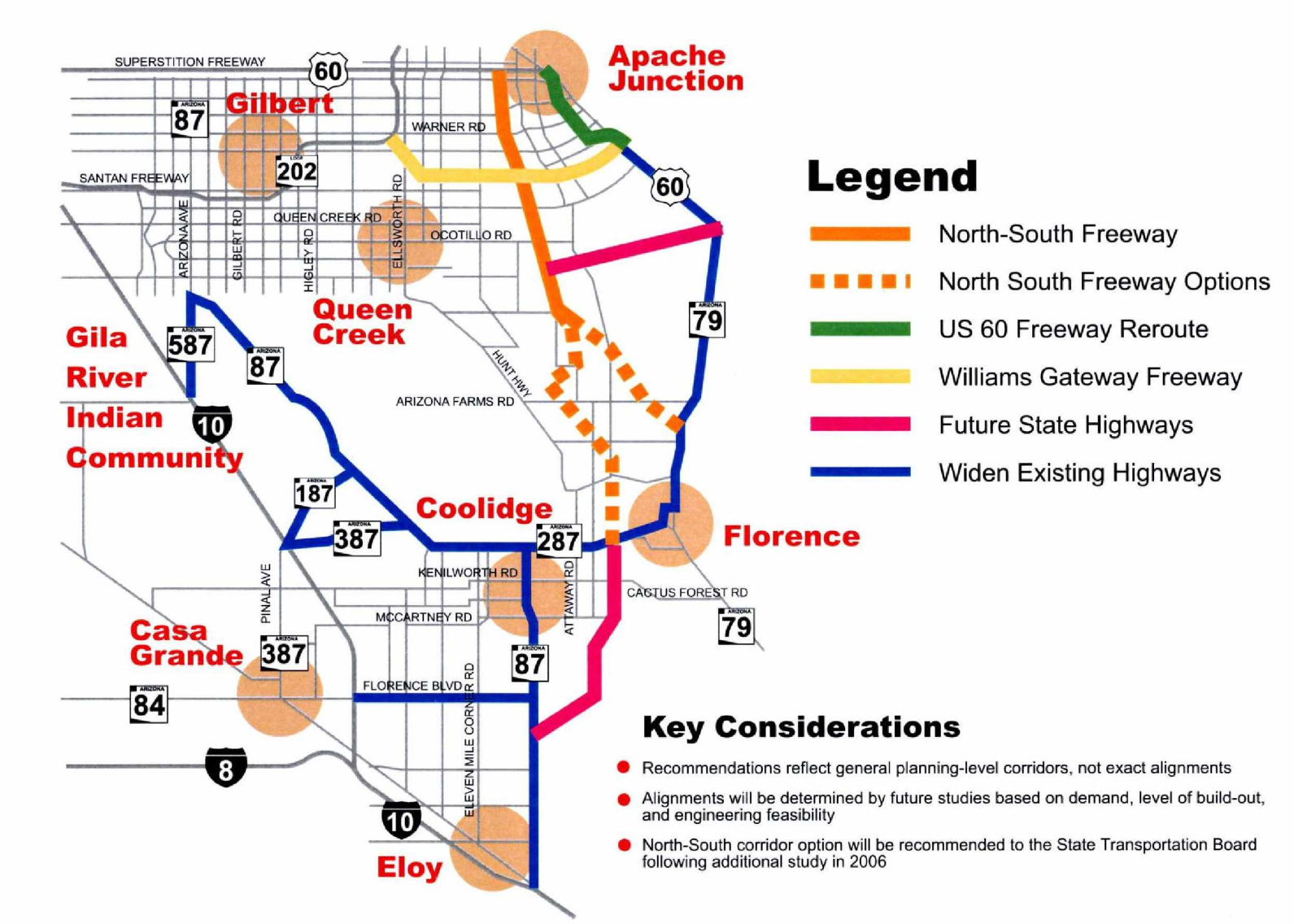
When this project started it was recognized that the study area within Maricopa County for this project would overlap with the Williams Gateway Corridor Definition Study that was initiated by ADOT. The ADOT Williams Gateway Corridor Definition Study would evaluate the need for a potential new freeway corridor connecting the Santan Freeway (202L) in Maricopa County eastward to US 60 just south of Gold Canyon. The project team worked closely with ADOT in

coordinating and sharing information to avoid duplication of effort and to ensure compatibility with the ADOT study. The ADOT study has identified the need for a future freeway facility from the Santan Freeway (202L) to US 60 and has recommended a freeway corridor in Maricopa County that encompasses the WGF corridor (Figure 10).

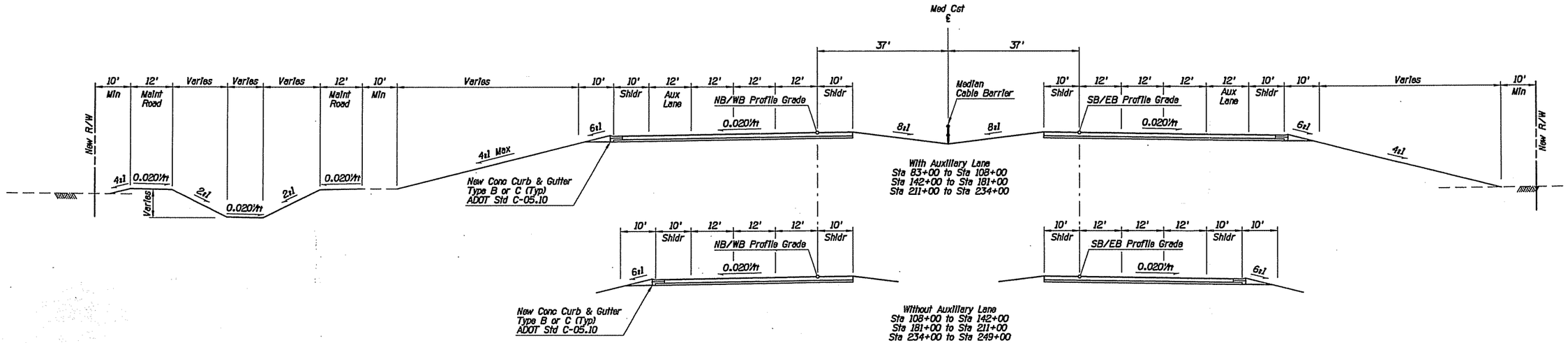
For the purpose of this study the WGF alignment terminates at Meridian Road (Maricopa/Pinal County boundary). During the study phase, it was recognized that this freeway would ultimately extend east into Pinal County and potentially link up with US 60 or some other state route. Considerations were given in selecting a preferred alternative that would not preclude the WGF alignment from extending east into Pinal County to US 60 as recommended in the ADOT WGF Corridor Definition Study. The exact alignment and details of the WGF alignment in Pinal County would be evaluated further during the design concept and environmental evaluation study phase to be conducted by ADOT.

In Phase I of the study process in which a preferred alignment was identified, it was suggested that the WGF should initially continue into Pinal County to Ironwood Drive, one mile east of the Maricopa County line in order to establish a link into Pinal County. Ironwood Drive is planned as a major north-south corridor that would feed the WGF from rapidly growing areas of Pinal County to the south. This extension would need to be accomplished with funding from sources other than MAG RTP/Proposition 400 revenue. Issues of logical termini and continuation into Pinal County will be further addressed in subsequent ADOT studies, and as part of the Design Concept Report (DCR) and National Environmental Policy Act (NEPA) process.

Figure 10 ADOT Corridor Definition Studies

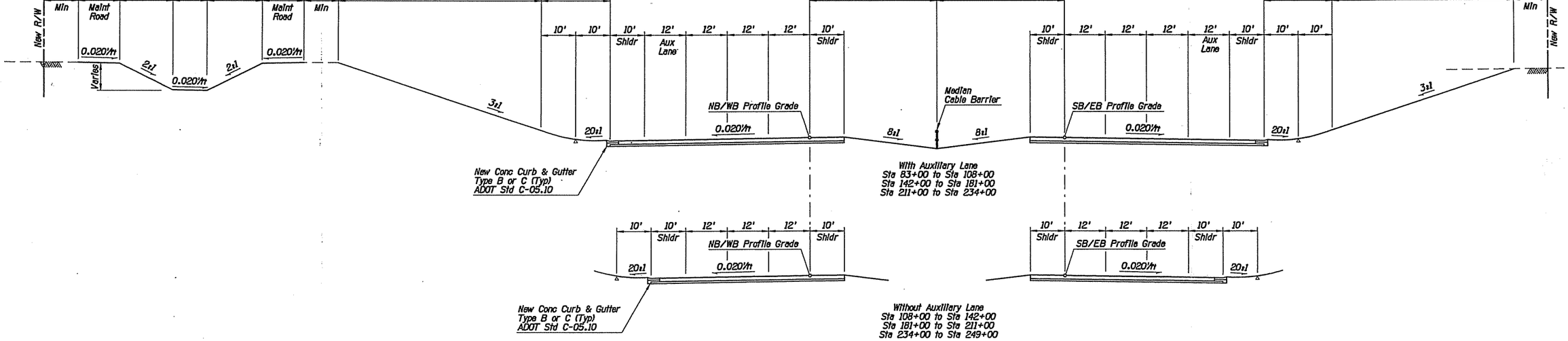


APPENDIX A: Detailed Plans for WGF



TYPICAL SECTION - MAINLINE

Elevated Option



TYPICAL SECTION - MAINLINE

Depressed Option

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TYPICAL SECTIONS

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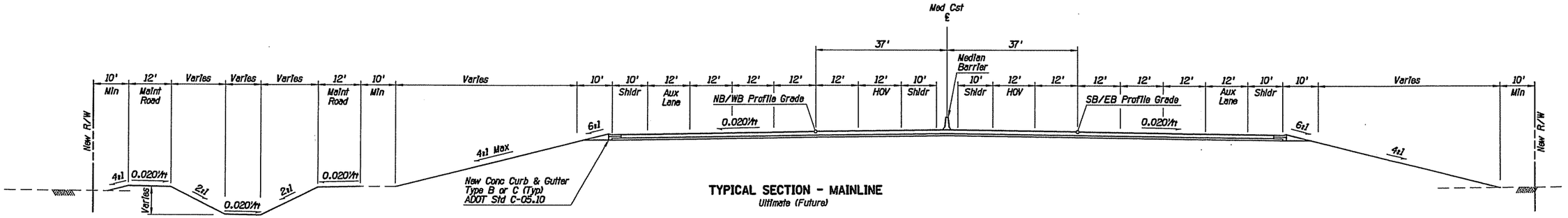
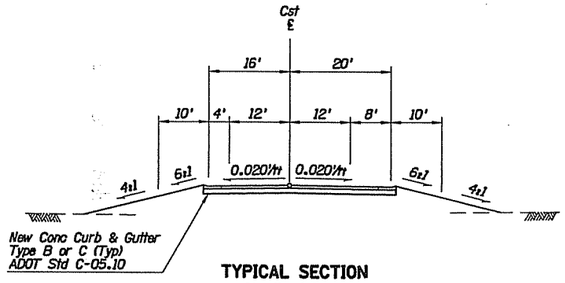


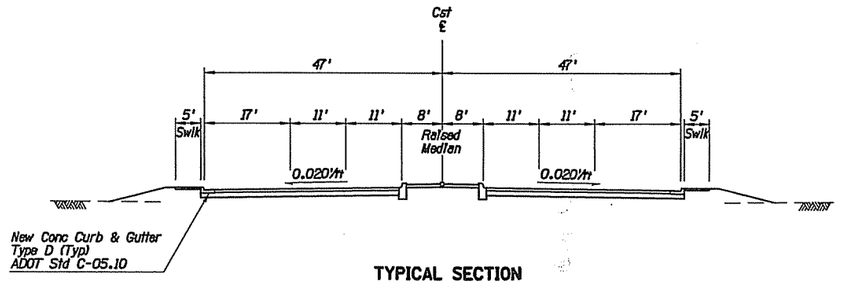
TYPICAL SECTION - MAINLINE

Ultimate (Future)



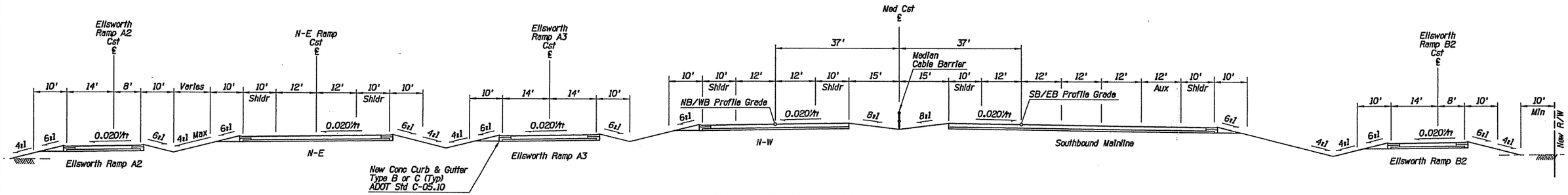
TYPICAL SECTION

Directional Ramp



TYPICAL SECTION

Major Arterial



TYPICAL SECTION - MAINLINE

Sta 10+00 to Sta 83+00

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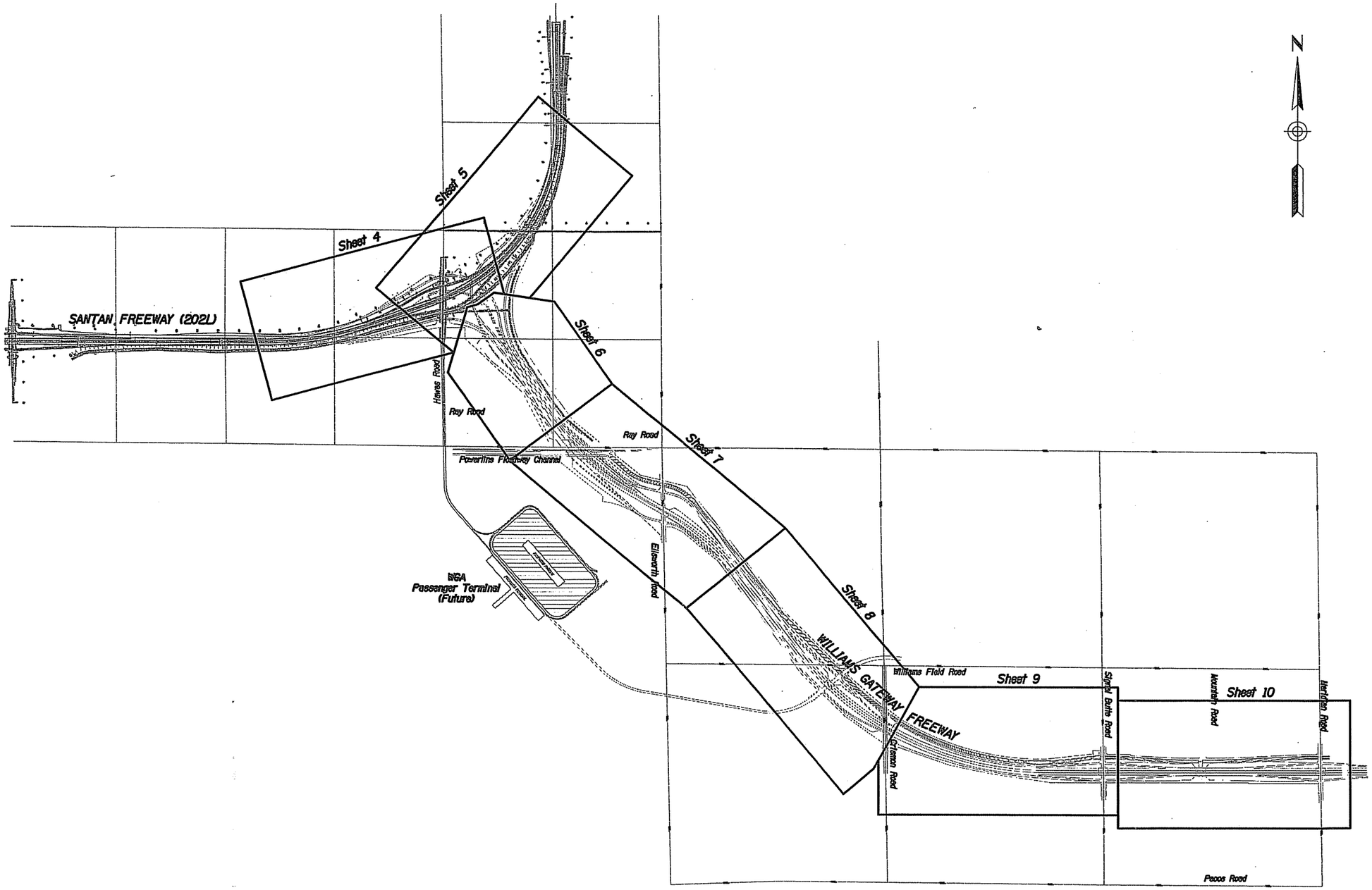

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	NAME	DATE
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SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

End N-W Ramp Cst ℄
PT Sta 73+40.61

PT 73+40.61

Mid-Section Line

202L Med Cst ℄

N-W Ramp Cst ℄

PC 42+74.29

PT 31+09.28

T01S R07E

Section Corner

PC 31+51.86

304-31-009-U
VAN RUN DAIRY

304-31-009-V
VAN RUN DAIRY

304-31-009-N
VAN RUN JODY

W-S Ramp Cst ℄

S49°33'

S59°13'03"W

733

732

722

741

742

N87°08'55"E

N74°32'29"E

Hawes Road

Future
HOV Connector

304-31-009-6
ARIZONA STATE OF
TRANSPORTATIONS DEPT OF

304-31-009-T
202 HOLDINGS

14+00

44+00

65+00

45+00

MATCH LINES STA 45+00

0 POB 0+00.00

Begin E-S Ramp Cst ℄
POT Sta 0+00.00

PC 12+00.00

Center Section

E-S Ramp Cst ℄

304-30-025-E
VIMARK INVESTMENTS LLC

304-30-025-D
ADOT

304-30-025-C
ADOT

PT 24+60.72

New R/W Corridor

340-30-024-E
202 HOLDINGS

340-30-025-A
202 HOLDINGS

304-31-009-S
202 HOLDINGS

PC 37+10.20

Mid-Section Line

E ¼ Cor Sec 20

W ¼ Cor Sec 21

Section Line

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SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

T01S R07E

Section Corner

Section Line

Section Line

Mid-Section Line

Center Section

Begin W-S Ramp Cst ℄
PC Sta 0+00.00

PC 0+00.00

Mid-Section Line

PT 31+09.28

N-W Ramp Cst ℄

S59°13'03"W

New R/W Corridor

E-S Ramp Cst ℄

Hawes Road

Future
HOV Connector

PC 31+37.86

PT 27+67.23

W-S Ramp Cst ℄

202L Med Cst ℄

S49°33'34"W

N19°18'03"E

End N-E Ramp Cst ℄
POT Sta 92+96.55

N27°43'59"E

MATCH LINES STA 45+00

44+00

14+00

65+00

W 1/4 Cor Sec 21

New R/W Corridor

N-E Ramp Cst ℄

PT 72+74.60

PC 82+97.56

PT 87+79.40

S 1/4 Cor Sec 16

304-31-009-S
202 HOLDINGS

304-31-009-G
ARIZONA STATE OF
TRANSPORTATIONS DEPT OF

304-31-009-R
ALIDUR LLC

304-31-009-H
VAN RUN DAIRY

304-31-009-I
VAN RUN DAIRY

304-31-009-J
VAN RUN DAIRY

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N

R07E

T6IS

Mid-Section Line

Center Section

Mid-Section Line

Begin N-W Ramp Cst ℄
PC Sta 0+00.00

Begin Williams Gateway Freeway Med Cst ℄
POT Sta 10+00.00

End Ellsworth Rd Ramp A2 Cst ℄
PT Sta 31+37.17

MATCH LINES STA 65+00

14+00

N-W Ramp Cst ℄

PC 9+04.97

PT 6+04.39

New R/W Corridor

PC 0+00.00

PC 48+96.45

N-E Ramp Cst ℄

Williams Gateway
Freeway Med Cst ℄

PT 32+09.76

PT 31+37.17

PT 34+78.00

Ellsworth Rd
Ramp A2 Cst ℄

Ellsworth Rd
Ramp A3 Cst ℄

MATCH LINE STA 32+00

N10°34'00"W

N31°43'14"W

S31°43'14"E

Future
HOV Connector

W-S Ramp Cst ℄

44+00

S42°13'14"E

S20°37'11"E

S40°13'23"E

S45°29'05"E

Begin Ellsworth Rd Ramp B2 Cst ℄
POT Sta 0+00.00

MATCH LINES STA 45+00

PC 6+16.19

PT 53+41.09

PC 54+17.83

PT 57+77.83

PC 58+38.82

PT 14+45.03

PC 17+88.34

PT 22+47.15

PT 66+89.06

PC 27+06.59

End Ellsworth Rd Ramp A3 Cst ℄
PT Sta 32+09.76

Ellsworth Rd Ramp B2 Cst ℄

New R/W Corridor

End W-S Ramp Cst ℄
PT Sta 57+77.83

E-S Ramp Cst ℄

End E-S Ramp Cst ℄
PT Sta 66+89.06

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SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE- | SURVEY NO.

Begin Ellsworth Rd Ramp A2 Cst ℄
PC Sta 0+00.00

Begin Ellsworth Rd Ramp A Cst ℄
POT Sta 0+00.00

Begin Ellsworth Rd Ramp A3 Cst ℄
POT Sta 0+00.00

Begin Ellsworth Rd Ramp C Cst ℄
POT Sta 0+00.00

Section Line

Section Corner

Section Line

T01S R07E

Ellsworth Rd Ramp A2 Cst ℄

Ellsworth Rd Ramp A3 Cst ℄

N-E Ramp Cst ℄

Ray Road

S1°06'47"E

PC 2+17.91

PT 9+16.27

Ellsworth Rd Ramp C Cst ℄

Williams Gateway Fwy Med Cst ℄

New R/W Corridor

PC 23+51.89

PC 24+69.70

PC 22+60.57

PC 17+25.74

PT 9+30.14

PT 7+51.46

PC 14+13.29

PT 6+12.94

PC 0+12.64

End Ellsworth Rd Ramp A Cst ℄
POT Sta 3+89.42

Begin N-E Ramp Cst ℄
PC Sta 0+00.00

S35°57'40"E

S76°06'47"E

PC 0+00

N48°24'27"W

N49°58'55"W

N50°16'15"W

S59°10'34"E

S51°00'20"E

MATCH LINE STA 32+00

MATCH LINE STA 88+00

Ellsworth Rd Ramp D Cst ℄

New R/W Corridor

PC 2+90.24

PT 5+72.04

PC 13+23.99

Begin Ellsworth Rd Ramp D Cst ℄
POT Sta 0+00.00

S46°56'59"E

S51°56'59"E

S76°06'47"E

Powerline Floodway Channel

New R/W Corridor

PC 35+81.30

Mid-Section Line

Ellsworth Rd Ramp B Cst ℄

Ellsworth Rd Ramp B2 Cst ℄

PT 49+29.91

PT 54+52.14

PC 59+57.64

PT 62+07.64

PC 17+94.88

PT 22+19.51

Ellsworth Road

Begin Ellsworth Rd Ramp B Cst ℄
POT Sta 0+00.00

End Ellsworth Rd Ramp B2 Cst ℄
PT Sta 62+07.64

End Ellsworth Rd Ramp B Cst ℄
POT Sta 25+26.61

Property Line (Typ)

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SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

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N
ROTE
T01S

Section Corner
Section Line
Section Line
Begin Williams Field Rd Ramp C Cst ℄
POT Sta 0+00.00
Williams Field Rd Ramp A Cst ℄
End Williams Field Rd Ramp A Cst ℄
POT Sta 21+57.47
Williams Gateway Fwy Med Cst ℄
End Ellsworth Rd Ramp C Cst ℄
PT Sta 27+55.67
Begin Williams Field Rd Ramp A Cst ℄
PC Sta 0+00.00
PT 27+55.67
PC 0+00.00
PT 10+05.12
New R/W Corridor
Crismon Rd
Williams Field Rd
Ramp C Cst ℄
PC 10+44.38
MATCH LINE STA 88+00
MATCH LINE STA 144+00
S48°01'52"E
S45°40'52"E
S64°18'13"E
S37°58'48"E
S30°29'26"E
S47°25'46"E
S47°25'46"E
411
203
431
421
422
441
Begin Williams Field Rd Ramp B Cst ℄
PC Sta 0+00.00
PC 0+00.00
PT 7+48.92
PC 113+10.65
PC 11+11.99
New R/W Corridor
PT 18+64.83
PT 21+92.37
PT 89+09.86
End Ellsworth Rd Ramp D Cst ℄
PT Sta 21+92.37
Williams Field Rd Ramp B Cst ℄
End Williams Field Rd Ramp B Cst ℄
POT Sta 21+50.48
Williams Field Rd
PC 5+46.41
PT 12+21.37
Williams Field Rd Ramp D Cst ℄
Begin Williams Field Rd Ramp D Cst ℄
POT Sta 0+00.00

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N

T01S R07E

26 25
35 36

Section Corner

Section Line

Signal Butte Rd

SR-SBS

MATCH LINE STA 144+00

20

Williams Field Rd Ramp C Cst ℄

End Williams Field Rd Ramp C Cst ℄
PT Sta 22+75.63

PT 22+75.63

431

60
304-34-014-A
PACIFIC PROVING LLC

Williams Gateway Fwy Med Cst ℄

Begin Signal Butte Rd Ramp A Cst ℄
PC Sta 0+00.00

New R/W Corridor

Signal Butte Rd
Ramp A Cst ℄

PC 0+00.00

0

5

PT 6+28.86

203

511

N86°10'01"E

End Signal Butte Rd Ramp A Cst ℄
POE Sta 21+33.99

Begin Signal Butte Rd Ramp C Cst ℄
POB Sta 0+00.00

10

15

20

0

65
304-34-205
LIBBEY JOSEPH H
/WILLIE M

67
304-34-025-F
FERGUSON TERRY

68
304-34-025-E
DE ANDA ALEJANDRO
/MARICELA

80
304-34-021-N
DEMURO PROPERTIES

66
304-34-025-A
STRINGHAM CINDY L

63
304-34-204
HANSON LARRY R
/PAMELA

64
304-34-017-X
HANSON LARRY R
/PAMELA

Signal Butte Rd
Ramp C Cst ℄

MATCH LINE STA 200+00

86
304-34-021-P
DANCER RICK L

145

150

End Williams Field Rd Ramp D Cst ℄
POE Sta 24+69.13

Williams Field Rd Ramp D Cst ℄

155

60
304-34-014-A
PACIFIC PROVING LLC

New R/W Corridor

521

S87°06'24"E

Section Line

160

165

170

Begin Signal Butte Rd Ramp B Cst ℄
POB Sta 0+00.00

POB 0+00.00

175

61
304-34-015-B
TUCKER PROPERTIES LTD

Signal Butte Rd
Ramp B Cst ℄

5

180

PT 182+46.67

PC 7+76.10

62
304-34-016-G
NAEGELI BRUCE A

End Signal Butte Rd Ramp B Cst ℄
POE Sta 21+57.66

PT 10+46.77

10

185

Begin Signal Butte Rd Ramp D Cst ℄
POB Sta 0+00.00

190

15

Signal Butte Rd
Ramp D Cst ℄

71
304-34-019-K
KITCHUKOV TODOR

195

20

70
304-34-019-F
THOMPSON WILLIAMW
& JUDITH A

21

0

Section Corner

34 35

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SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE- | SURVEY NO.

N

T01S ⊕ R07E

25
36

Section Corner

Section Line

MATCH LINE STA 200+00

80
304-34-021-N
DEMURO PROPERTIES

Williams Gateway Fwy Med Cst ℄

82
304-34-021-S
SCHUERMAN MICHALEL G

Signal Butte Rd Ramp C Cst ℄

81
304-34-021-R
DEMURO EUGENE TR
/TR BALDELLI JOSEPH

PC 16+70.33

PT 20+26.93

End Signal Butte Rd Ramp C Cst ℄
PT Sta 20+26.93

83
304-34-203
G M 50 LLC

New R/W Corridor

PC 0+00.00

84
304-34-202
AM-SAFE INC

PT 3+94.92

Begin Meridian Rd Ramp A Cst ℄
PC Sta 0+00.00

85
304-34-056
AM-SAFE INC

End Meridian Rd Ramp A Cst ℄
POE Sta 20+41.22

Meridian Rd
Ramp A Cst ℄

End Williams Gateway Fwy
Med Cst ℄ POE Sta 249+02.25

S86°26'03"E

531

N90°00'00"E

611

N86°03'03"E

86
304-34-021-P
DANCER RICK L

87
304-34-021-Q
DEMURO ARTHUR/SUSAN

N86°00'19"E

541

S86°28'19"E

621

77
304-34-042-B
FUJIFILM ELECTRONIC
MATERIALS USA INC

88
304-34-042-A
FUJIFILM ELECTRONIC
MATERIALS USA INC

71
304-34-019-K
KITCHUKOV TODOR

72
304-34-019-L
GIORDANO CHARLES
/KATHLEEN ETAL

Signal Butte Rd Ramp D Cst ℄

76
304-34-041
FUJIFILM ELECTRONIC
MATERIALS USA INC

73
304-34-019-Q
GUSTAFSON SUSIE D
& KELLY & KRISTY

74
304-34-019-R
GUSTAFSON SUSIE D
& KELLY & KRISTY

75
304-34-019-S
GUSTAFSON VICTOR
GARY

PC 16+22.91

PT 20+22.39

78
304-34-020-W
BAWOLEK EDWARD J
/SUSAN J TR

New R/W Corridor

PC 0+00.00

PT 3+52.80

Meridian Rd
Ramp B Cst ℄

79
304-34-057
VIEWPOINT RESORT LC

70
304-34-019-F
THOMPSON WILLIAM W
& JUDITH A

End Signal Butte Rd Ramp D Cst ℄
PT Sta 20+22.39

Begin Meridian Rd Ramp B Cst ℄
PC Sta 0+00.00

End Meridian Rd Ramp B Cst ℄
POE Sta 20+44.97

Meridian Rd

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(602) 331-2177

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2/27/2006 n:\6495\Prod\civ\wgcg107.dgn

PLAN REF NO	LOCATION	P.I./P.O.T. STATION											
201	Williams Gateway Fwy Med Cst ℄	41+06.25			SIMPLE	Δ=27°27'20"	D=1°00'00"	R=5729.578	T=1399.662	L=2745.552	Ext=168.482	e = 0.030	
202	Williams Gateway Fwy Med Cst ℄	78+62.31			SIMPLE	Δ=21°11'46"	D=1°00'00"	R=5729.578	T=1072.065	L=2119.620	Ext=99.435	e = 0.030	
203	Williams Gateway Fwy Med Cst ℄	150+38.32			SIMPLE	Δ=52°01'12"	D=0°45'00"	R=7639.437	T=3727.663	L=6936.016	Ext=860.943	e = 0.024	
311	Ellsworth Rd Ramp A2 Cst ℄	3+89.42			SIMPLE	Δ=27°42'21"	D=3°45'00"	R=1527.887	T=376.780	L=738.819	Ext=45.772	e = 0.050	
312	Ellsworth Rd Ramp A2 Cst ℄	28+05.82			SIMPLE	Δ=16°41'13"	D=2°30'00"	R=2291.831	T=336.117	L=667.475	Ext=24.516	e = 0.040	
313	Ellsworth Rd Ramp A3 Cst ℄	6+76.19			SIMPLE	Δ=25°50'32"	D=5°00'00"	R=1145.916	T=262.895	L=516.847	Ext=29.770	e = 0.056	
314	Ellsworth Rd Ramp A3 Cst ℄	24+74.30			SIMPLE	Δ=18°33'01"	D=1°15'00"	R=4583.662	T=748.560	L=1484.019	Ext=60.722	e = 0.024	
321	Ellsworth Rd Ramp B Cst ℄	20+11.94			SIMPLE	Δ=29°09'48"	D=6°52'01"	R=834.364	T=217.052	L=424.690	Ext=27.770	e = 0.060	
322	Ellsworth Rd Ramp B2 Cst ℄	10+37.24			SIMPLE	Δ=24°51'55"	D=3°00'00"	R=1909.859	T=421.049	L=828.839	Ext=45.862	e = 0.045	
323	Ellsworth Rd Ramp B2 Cst ℄	20+18.86			SIMPLE	Δ=13°45'51"	D=3°00'00"	R=1909.859	T=230.514	L=458.809	Ext=13.861	e = 0.045	
324	Ellsworth Rd Ramp B2 Cst ℄	42+62.70			SIMPLE	Δ=20°13'45"	D=1°30'00"	R=3819.719	T=681.398	L=1348.609	Ext=60.301	e = 0.028	
325	Ellsworth Rd Ramp B2 Cst ℄	60+82.72			SIMPLE	Δ=5°00'00"	D=2°00'00"	R=2864.789	T=125.080	L=250.001	Ext=2.729	e = 0.056	
331	Ellsworth Rd Ramp C Cst ℄	5+82.15			SIMPLE	Δ=40°09'08"	D=5°45'00"	R=996.448	T=364.177	L=698.298	Ext=64.463	e = 0.058	
332	Ellsworth Rd Ramp C Cst ℄	25+53.80			SIMPLE	Δ=2°01'08"	D=0°30'00"	R=11459.156	T=201.911	L=403.780	Ext=1.779	e = NC	
341	Ellsworth Rd Ramp D Cst ℄	3+92.21			SIMPLE	Δ=25°06'27"	D=6°52'01"	R=834.364	T=185.795	L=365.626	Ext=20.436	e = 0.060	
342	Ellsworth Rd Ramp D Cst ℄	17+60.06			SIMPLE	Δ=13°01'33"	D=1°30'00"	R=3819.719	T=436.072	L=868.384	Ext=24.811	e = 0.028	
411	Williams Field Rd Ramp A Cst ℄	5+03.85			SIMPLE	Δ=10°03'04"	D=1°00'00"	R=5729.578	T=503.852	L=1005.118	Ext=22.111	e = NC	
421	Williams Field Rd Ramp B Cst ℄	3+75.00			SIMPLE	Δ=7°29'21"	D=1°00'00"	R=5729.578	T=374.996	L=748.923	Ext=12.258	e = NC	
422	Williams Field Rd Ramp B Cst ℄	14+91.17			SIMPLE	Δ=16°56'20"	D=2°15'00"	R=2546.479	T=379.185	L=752.838	Ext=28.077	e = 0.038	
431	Williams Field Rd Ramp C Cst ℄	16+65.39			SIMPLE	Δ=18°28'08"	D=1°30'00"	R=3819.706	T=621.010	L=1231.246	Ext=50.153	e = 0.028	
441	Williams Field Rd Ramp D Cst ℄	8+86.35			SIMPLE	Δ=16°52'27"	D=2°30'00"	R=2291.831	T=339.944	L=674.966	Ext=25.074	e = 0.040	

CURVE DATA TABLE

DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO.

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

GEOMETRIC DATA SHEET

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

PLAN REF NO	LOCATION	P.I./P.O.T. STATION										
511	Signal Butte Rd Ramp A Cst ℄	3+15.14			SIMPLE	Δ=9°25'59"	D=1°30'00"	R=3819.706	T=315.143	L=628.861	Ext=12.978	e = 0.028
521	Signal Butte Rd Ramp B Cst ℄	9+11.46			SIMPLE	Δ=2°42'24"	D=1°00'00"	R=5729.578	T=135.360	L=270.670	Ext=1.599	e = NC
531	Signal Butte Rd Ramp C Cst ℄	18+48.69			SIMPLE	Δ=3°33'57"	D=1°00'00"	R=5729.578	T=178.354	L=356.594	Ext=2.775	e = NC
541	Signal Butte Rd Ramp D Cst ℄	18+22.73			SIMPLE	Δ=3°59'41"	D=1°00'00"	R=5729.578	T=199.821	L=399.479	Ext=3.483	e = NC
611	Meridian Rd Ramp A Cst ℄	1+97.54			SIMPLE	Δ=3°56'57"	D=1°00'00"	R=5729.578	T=197.536	L=394.915	Ext=3.404	e = NC
621	Meridian Rd Ramp B Cst ℄	1+76.45			SIMPLE	Δ=3°31'41"	D=1°00'00"	R=5729.578	T=176.455	L=352.798	Ext=2.717	e = NC
711	N-E Ramp Csl ℄	3+07.13			SIMPLE	Δ=9°11'38"	D=1°30'00"	R=3819.719	T=307.127	L=612.935	Ext=12.327	e = 0.032
712	N-E Ramp Csl ℄	28+74.49			SIMPLE	Δ=18°15'41"	D=1°30'00"	R=3819.719	T=613.922	L=1217.433	Ext=49.022	e = 0.032
713	N-E Ramp Csl ℄	62+05.11			SIMPLE	Δ=59°27'13"	D=2°30'00"	R=2291.831	T=1308.658	L=2378.144	Ext=347.312	e = 0.045
714	N-E Ramp Csl ℄	85+38.91			SIMPLE	Δ=8°25'56"	D=1°45'00"	R=3274.044	T=241.353	L=481.835	Ext=8.884	e = 0.036
721	W-S Ramp Cst ℄	14+47.48			SIMPLE	Δ=41°30'30"	D=1°30'00"	R=3819.719	T=1447.482	L=2767.226	Ext=265.065	e = 0.032
722	W-S Ramp Cst ℄	42+63.65			SIMPLE	Δ=91°46'48"	D=5°15'00"	R=1091.348	T=1125.790	L=1748.189	Ext=476.594	e = 0.060
723	W-S Ramp Cst ℄	56+28.26			SIMPLE	Δ=10°30'00"	D=3°30'00"	R=1637.022	T=150.421	L=300.000	Ext=6.896	e = 0.054
731	N-W Ramp Cst ℄	3+05.68			SIMPLE	Δ=21°09'14"	D=3°30'00"	R=1637.022	T=305.677	L=604.393	Ext=28.295	e = 0.054
732	N-W Ramp Cst ℄	25+48.07			SIMPLE	Δ=110°12'56"	D=5°00'00"	R=1145.916	T=1643.108	L=2204.312	Ext=857.313	e = 0.060
733	N-W Ramp Cst ℄	58+45.12			SIMPLE	Δ=30°39'47"	D=1°00'00"	R=5729.578	T=1570.832	L=3066.319	Ext=211.430	e = 0.023
741	E-S Ramp Cst ℄	18+32.92			SIMPLE	Δ=12°36'26"	D=1°00'00"	R=5729.578	T=632.914	L=1260.717	Ext=34.851	e = 0.023
742	E-S Ramp Cst ℄	46+26.88			SIMPLE	Δ=65°14'08"	D=4°00'00"	R=1432.394	T=916.680	L=1630.887	Ext=268.210	e = 0.057
743	E-S Ramp Cst ℄	62+64.72			SIMPLE	Δ=8°30'09"	D=1°00'00"	R=5729.578	T=425.906	L=850.249	Ext=15.808	e = 0.023

CURVE DATA TABLE

DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO.

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

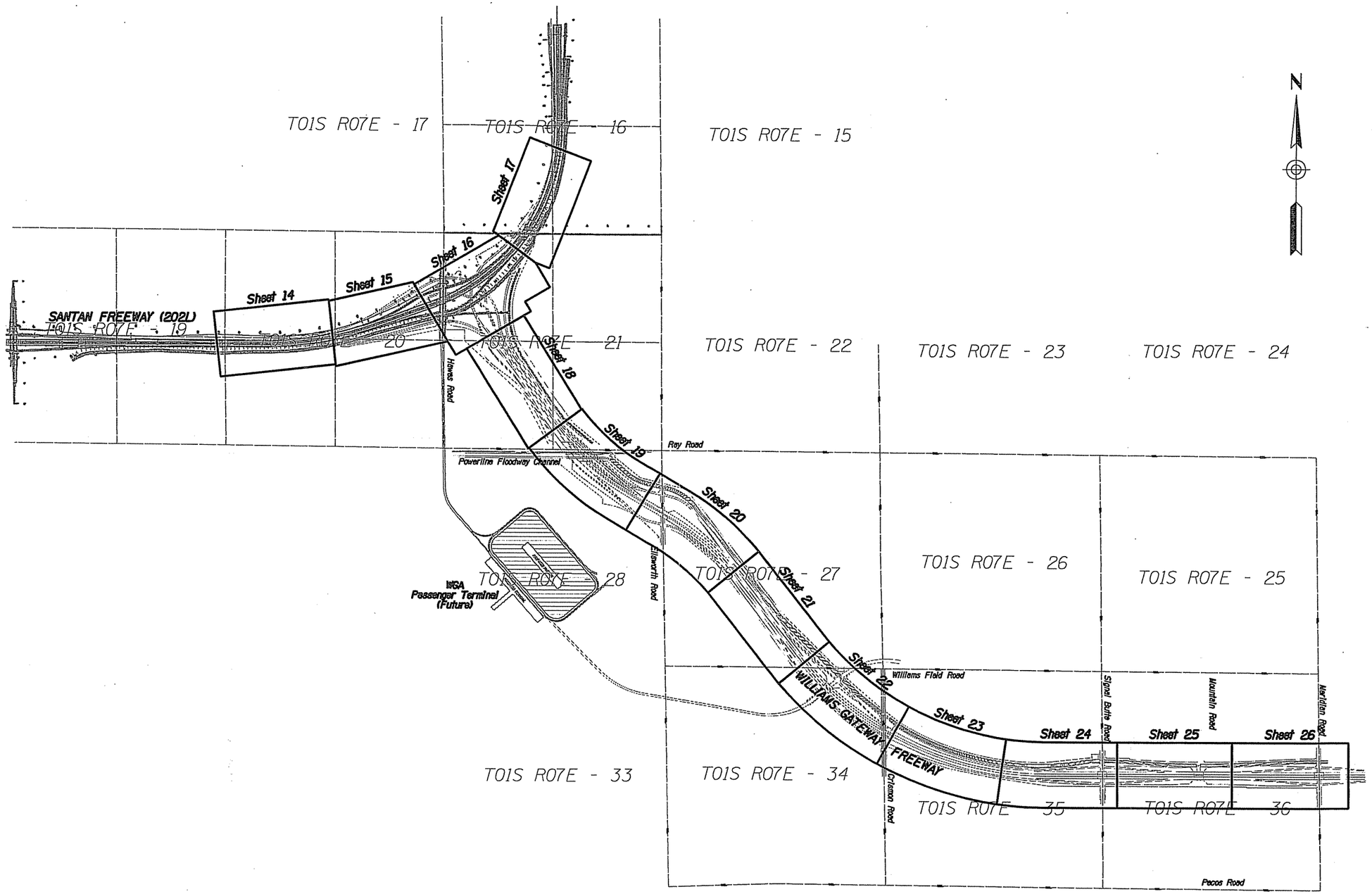
GEOMETRIC DATA SHEET

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcgd02.dgn



SURVEY NO.	FINISHED PLANS-	REVISIONS-	DATE-
SURVEY NO.	FINISHED PLANS-	LOCATION-	DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM — 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

KEYMAP

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	NAME	DATE
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DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

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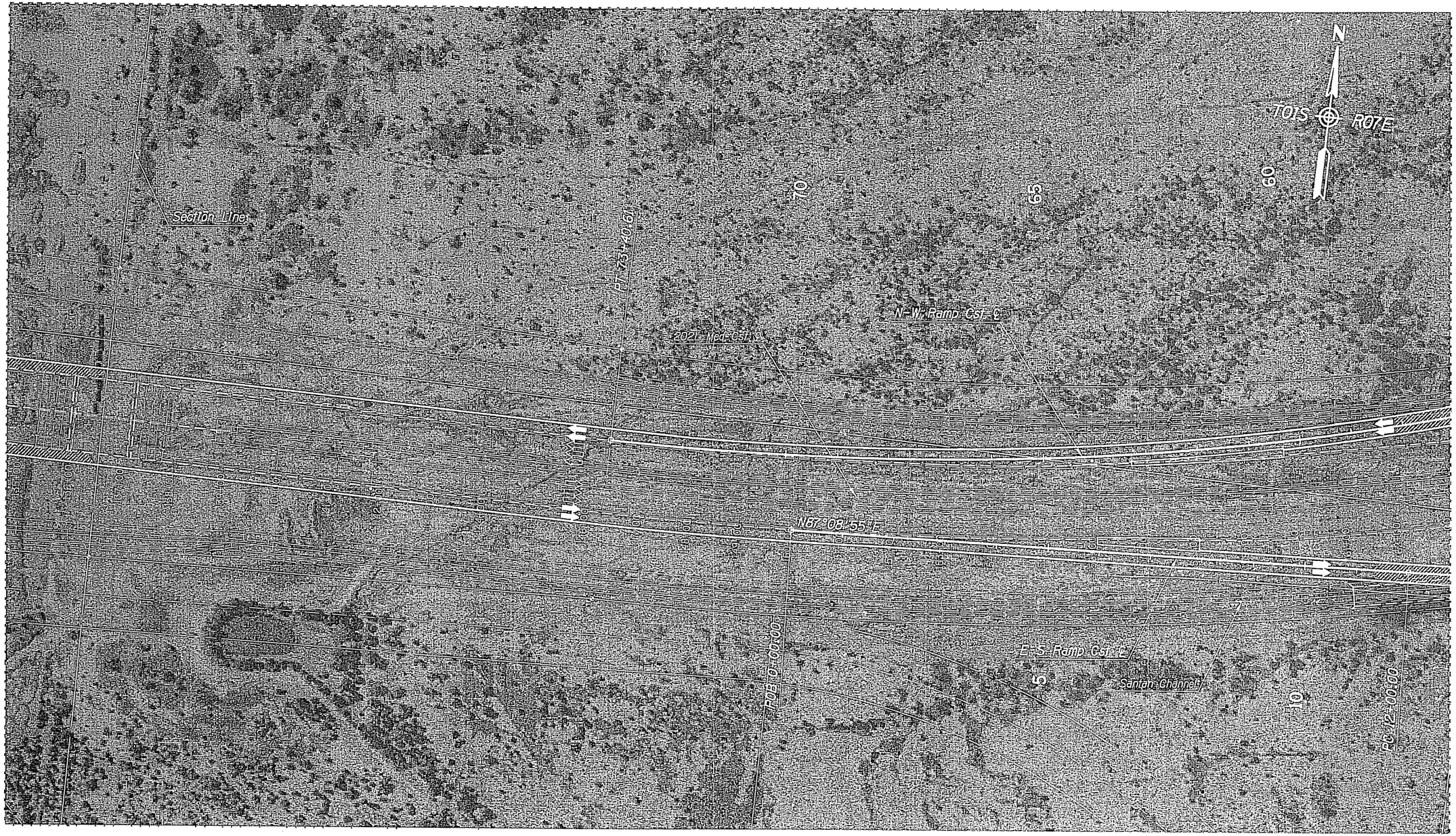

SURVEY NO.	FINISHED PLANS-	REVISIONS-	LOCATION-	DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM — 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PLAN SHEET
STA 3035+00 TO STA 3063+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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1/31/2006 n:\6495\Prod\civ\wgcpl01.dgn

SURVEY NO.	FINISHED PLANS-	REVISIONS-	LOCATION-	DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 331-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PLAN SHEET
STA 3063+00 TO STA 3087+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

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NOT FOR
CONSTRUCTION
OR RECORDING

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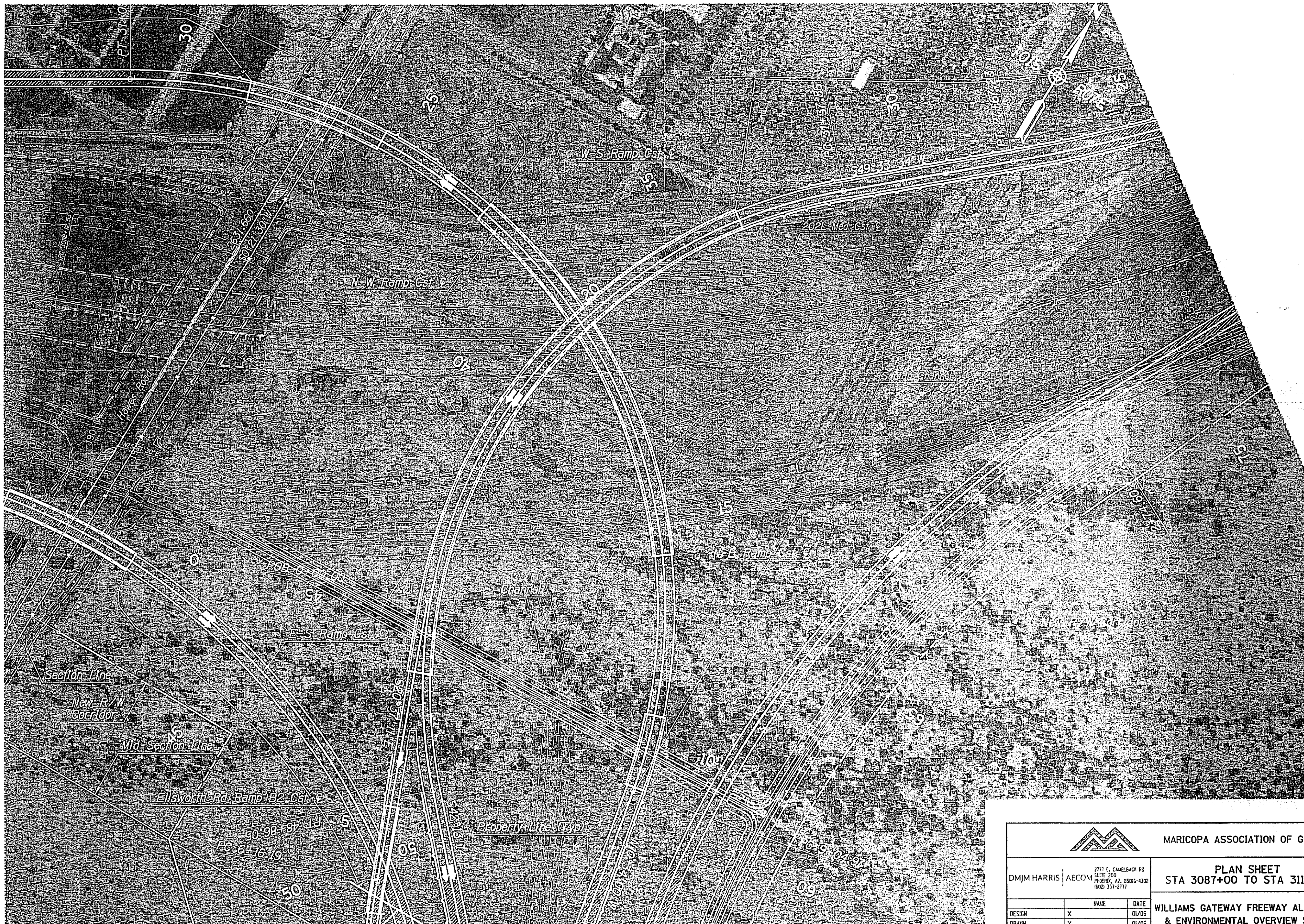
1/31/2006 n:\6495\Prod\civ\wgep102.dgn



SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

PLAN SHEET
STA 3087+00 TO STA 3113+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

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	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

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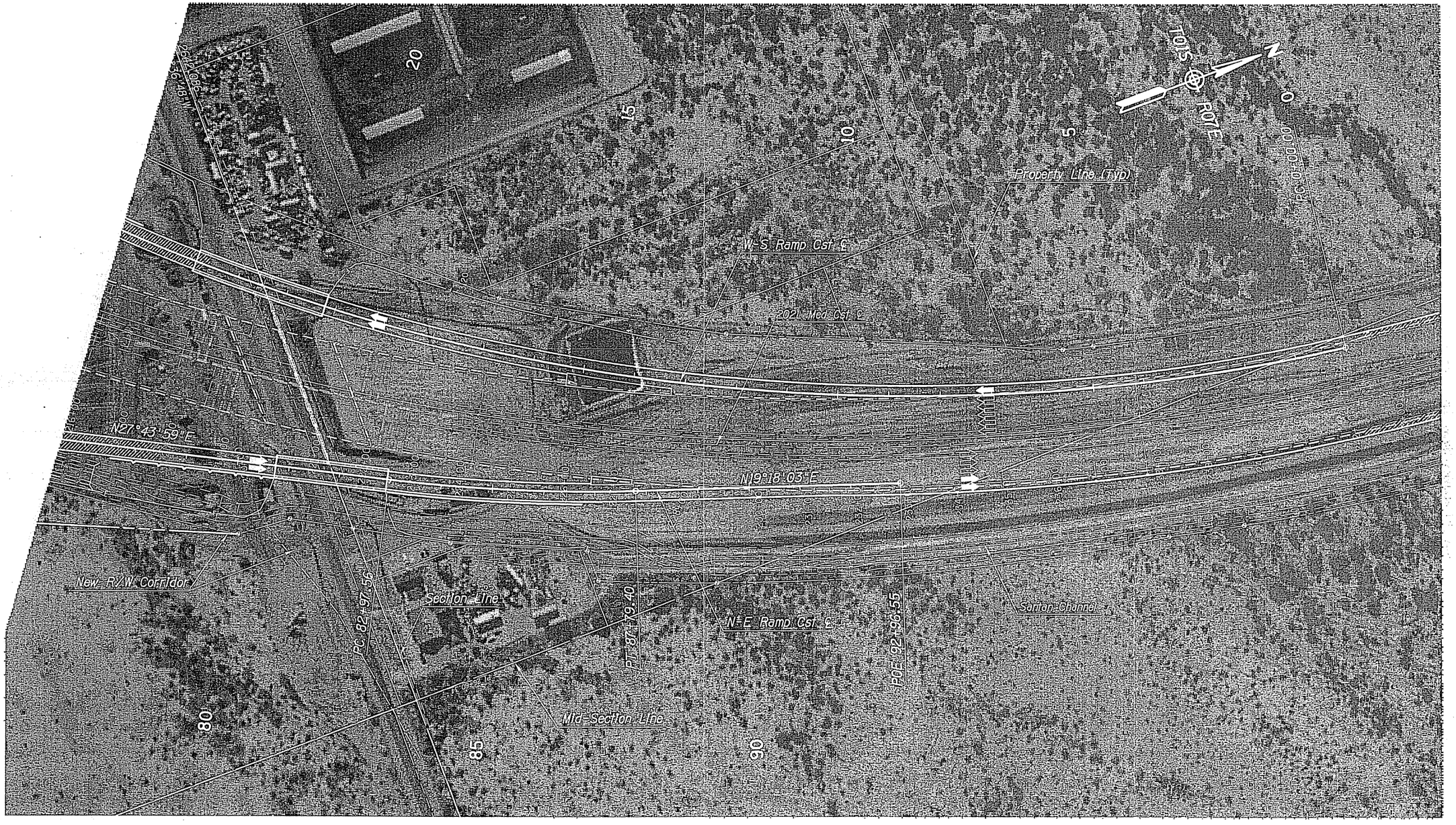

SURVEY NO.	FINISHED PLANS-	REVISIONS-	LOCATION-	DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PLAN SHEET
STA 3113+00 TO STA 3140+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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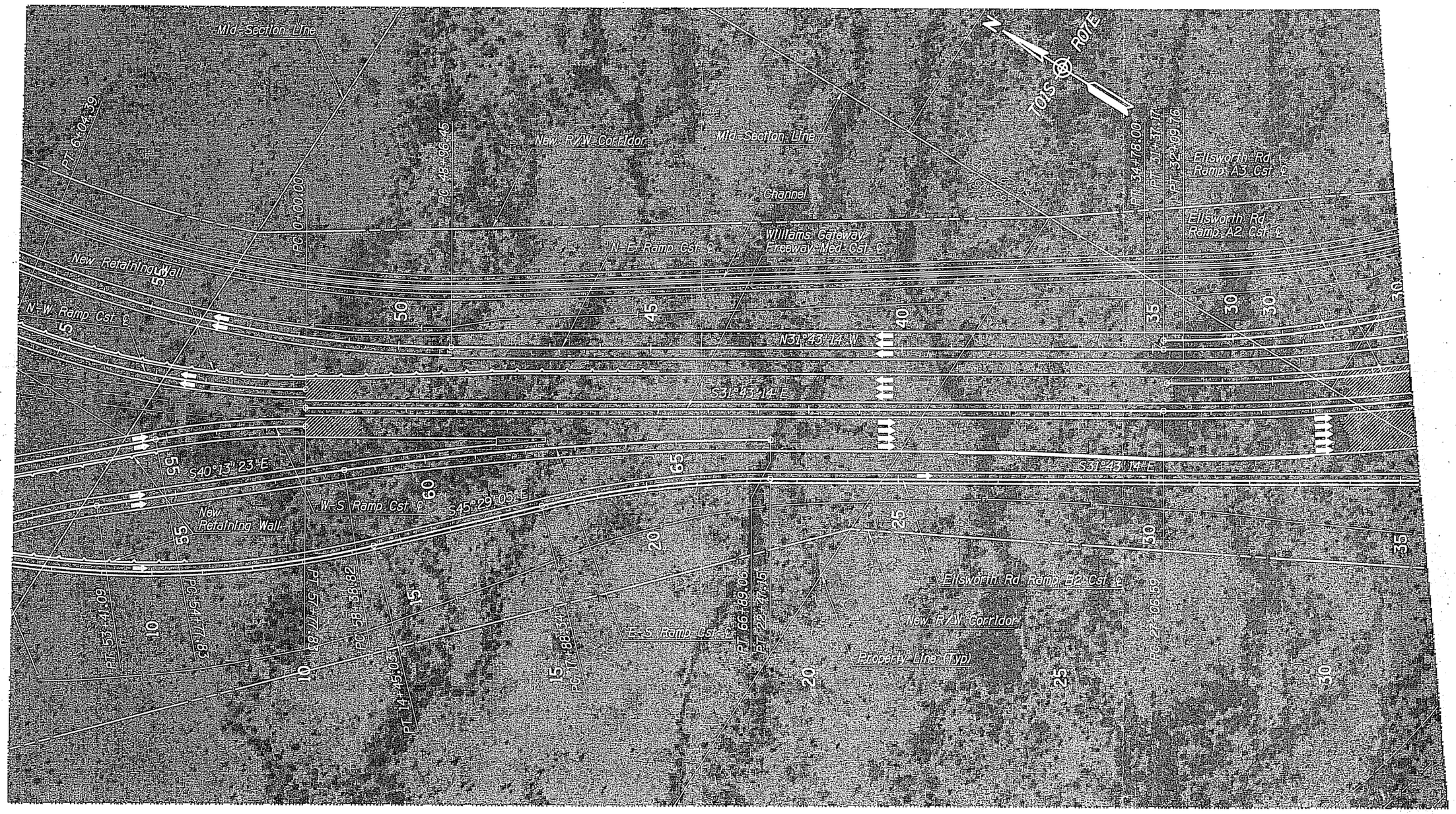
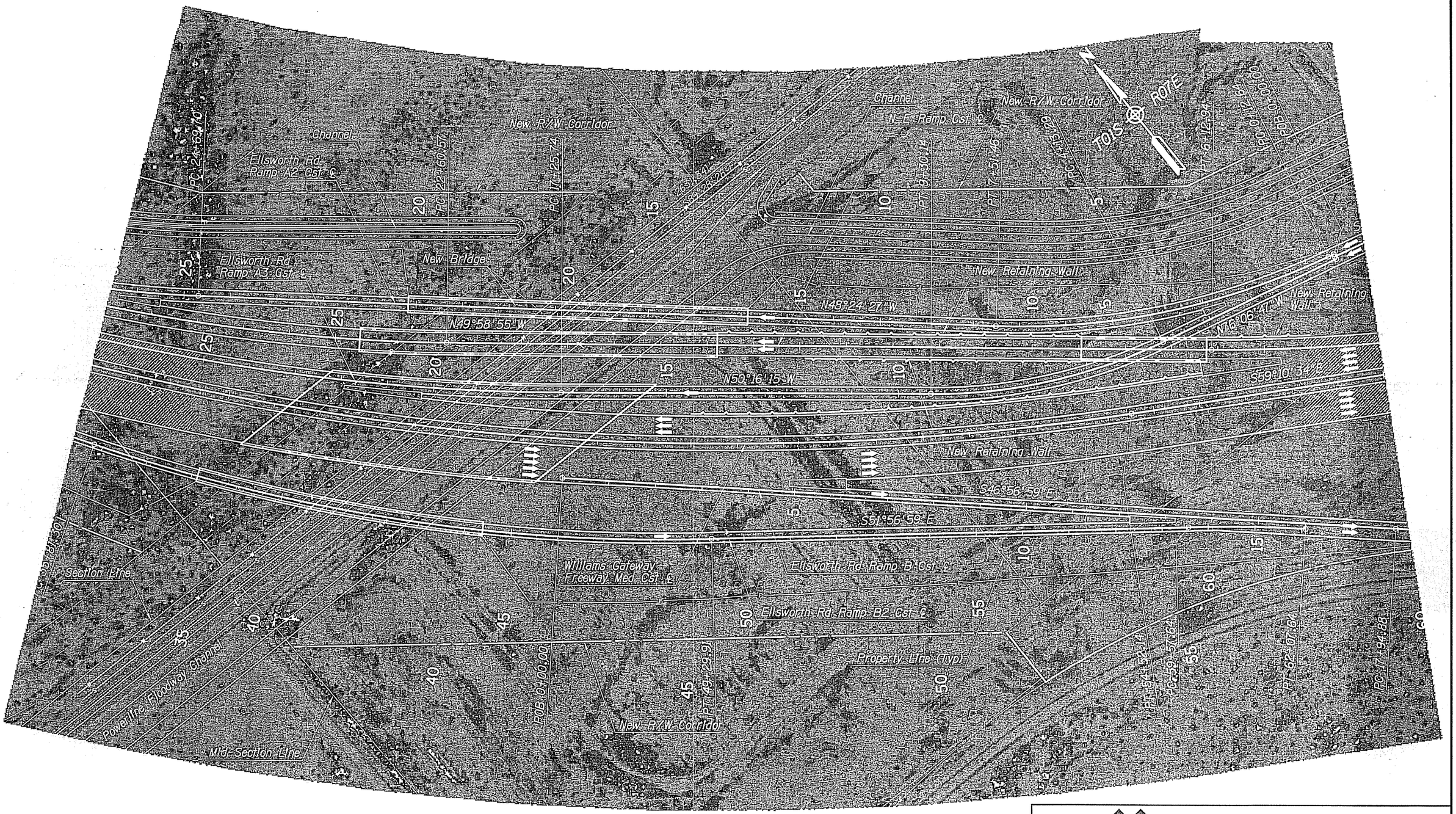
1/31/2006 n:\6495\Prod\civ\wgap104.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



	MARICOPA ASSOCIATION OF GOVERNMENTS		
DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777	PLAN SHEET STA 10+00 TO STA 32+00	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING	
	NAME / DATE	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	18 OF 51
DESIGN	X 01/06		
DRAWN	X 01/06		
CHECKED	X 01/06		

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777	PLAN SHEET STA 32+00 TO STA 60+00	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
NAME / DATE: DESIGN X 01/06; DRAWN X 01/06; CHECKED X 01/06	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	19 OF 51

1/31/2006 n:\6495\Prod\civ\wgcpl06.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE- | SURVEY NO.

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM	2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PLAN SHEET
STA 60+00 TO STA 88+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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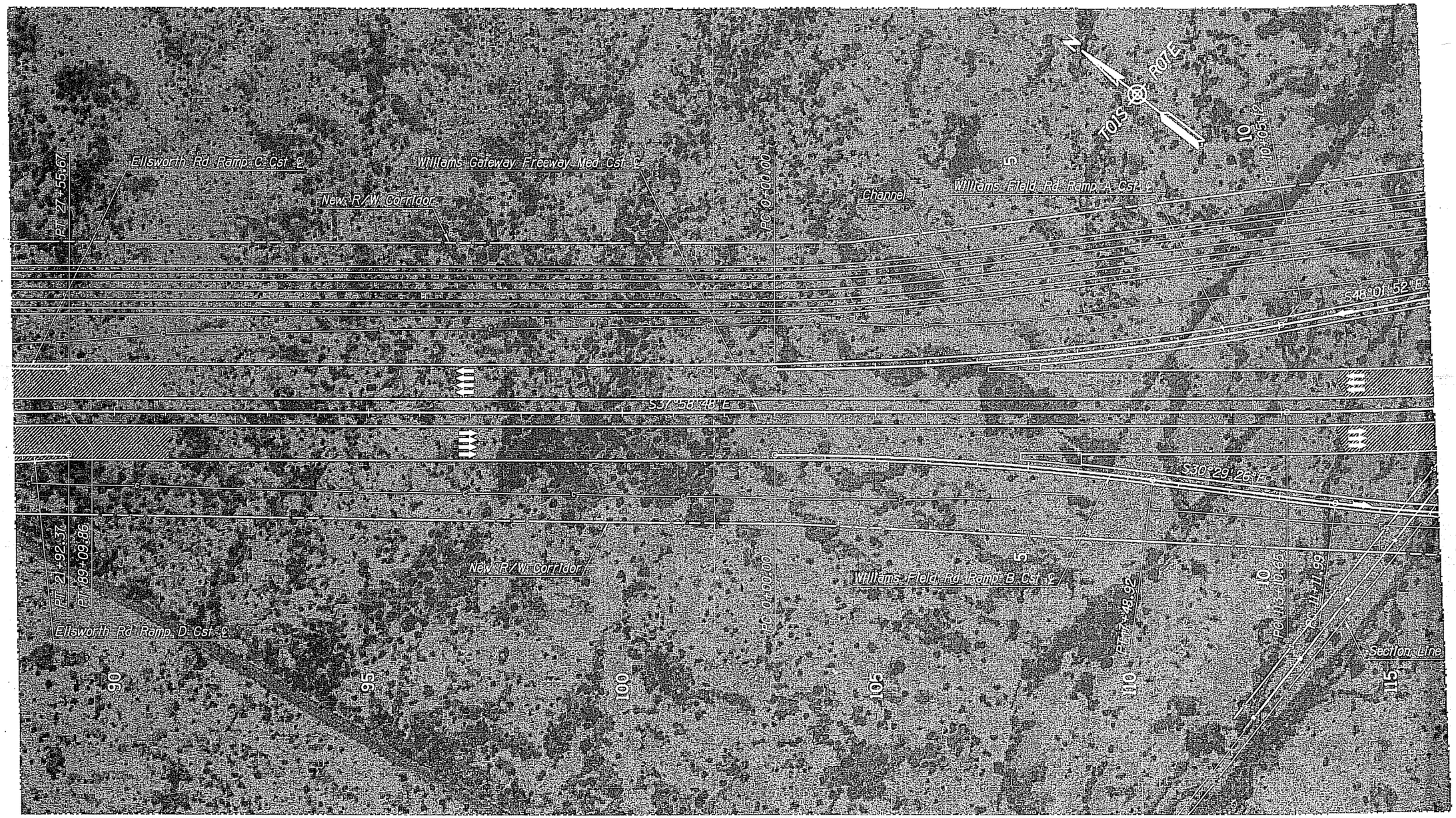
1/31/2006 n:\6495\Prod\civ\wgcpl07.dgn



SURVEY NO.	FINISHED PLANS-	REVISIONS-	LOCATION-	DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM — 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PLAN SHEET
STA 88+00 TO STA 116+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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1/31/2006 n:\6495\Prod\civ\wgcpl08.dgn

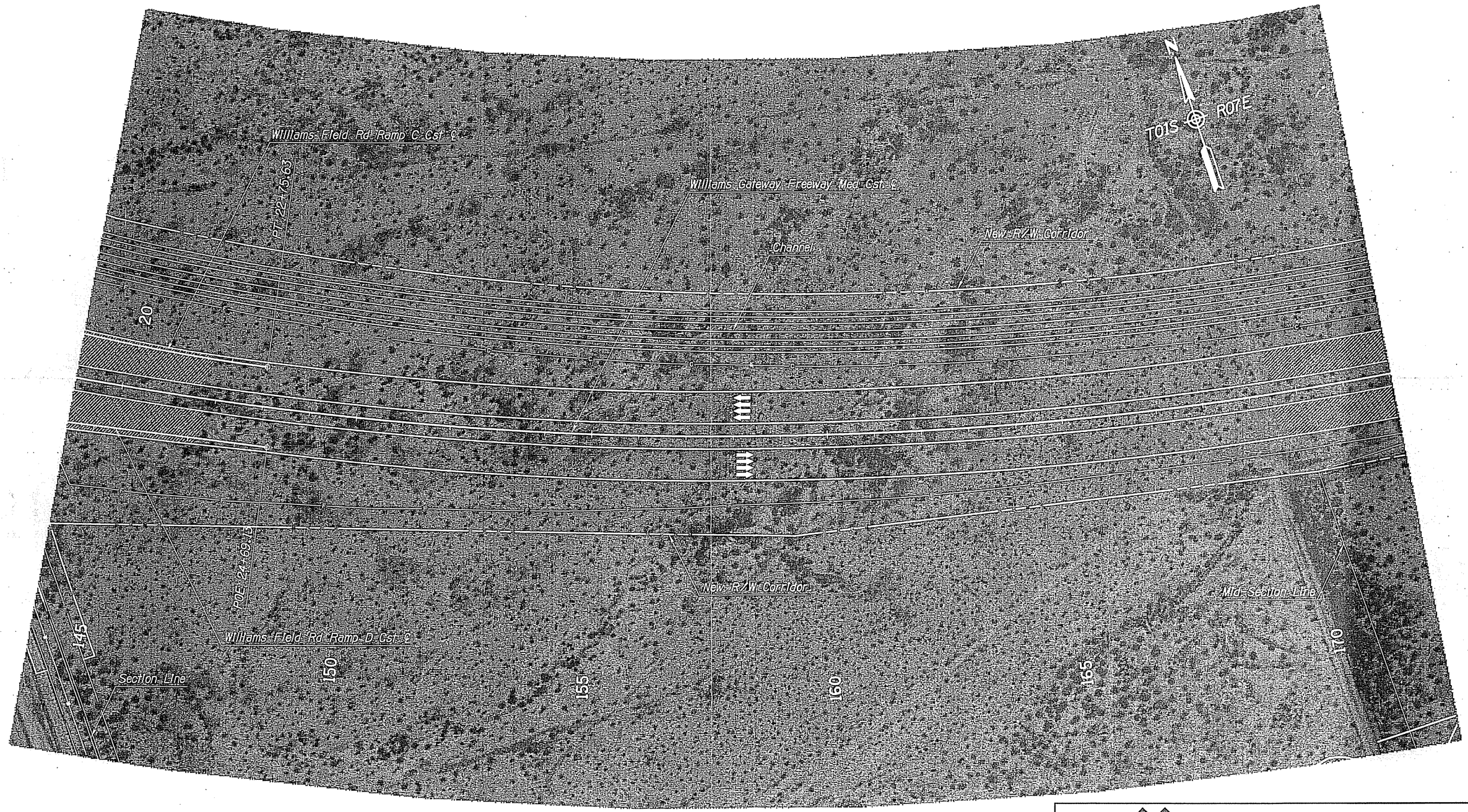
SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777	PLAN SHEET STA 116+00 TO STA 144+00	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
NAME / DATE: DESIGN X 01/06; DRAWN X 01/06; CHECKED X 01/06	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	22 OF 51

1/31/2006 n:\6495\Prod\civ\wgcpl09.dgn

SURVEY NO. | FINISHED PLANS | REVISIONS | LOCATION | DATE



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

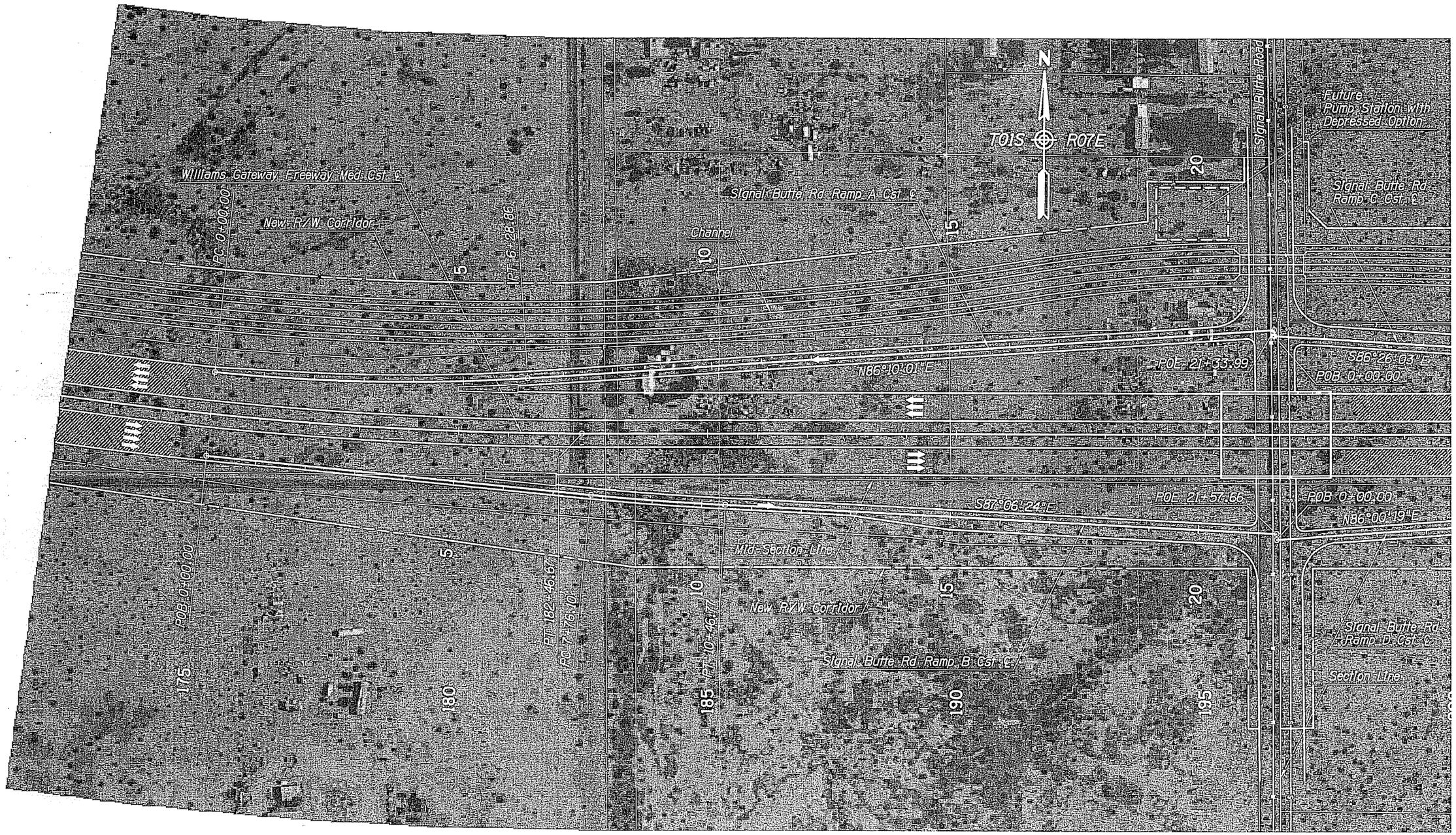
PLAN SHEET
STA 144+00 TO STA 172+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

23 OF 51

1/31/2006 n:\6495\Prod\civ\wgap110.dgn

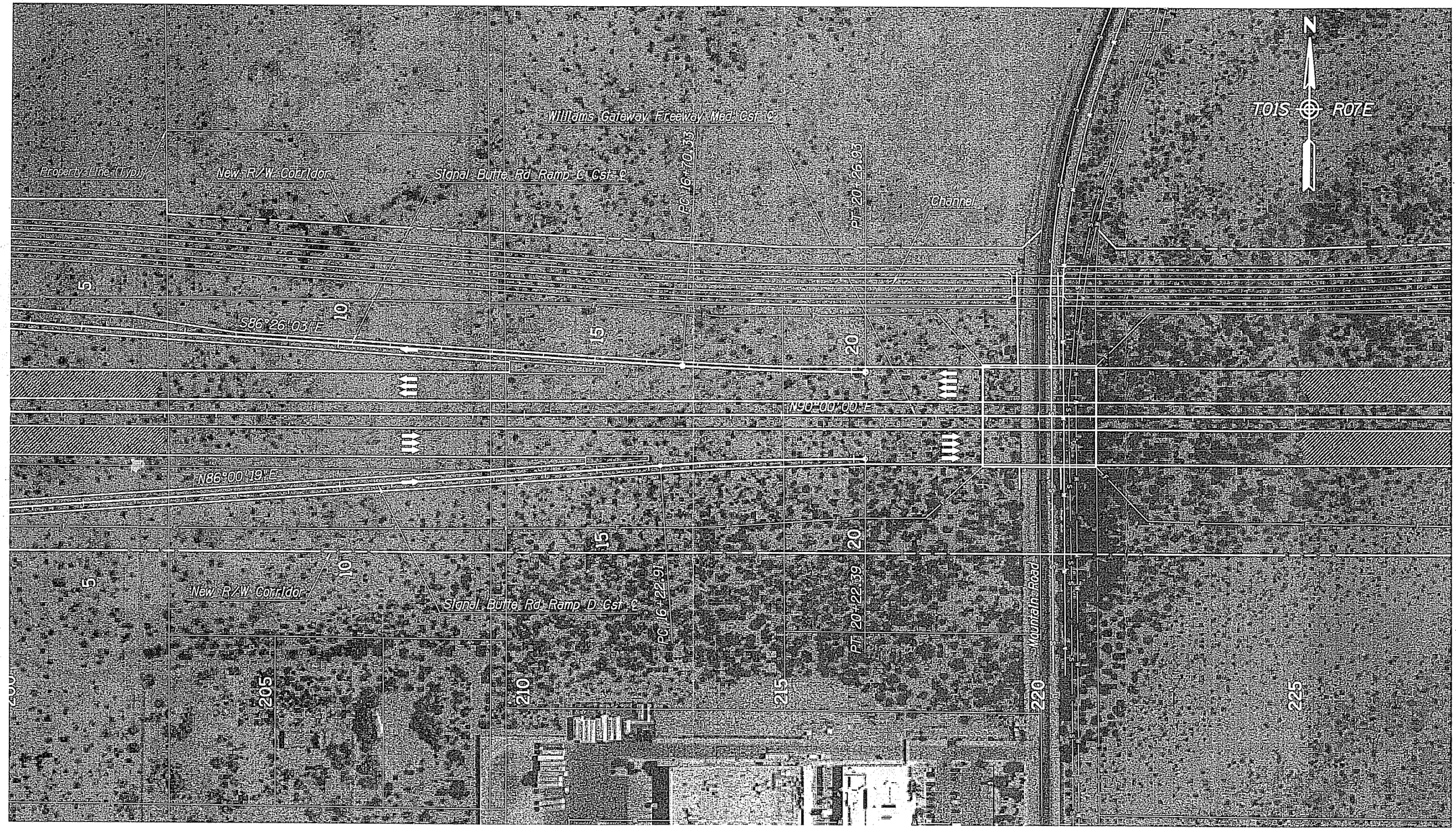


	MARICOPA ASSOCIATION OF GOVERNMENTS		
DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777	PLAN SHEET STA 172+00 TO STA 200+00	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING	
	NAME	DATE	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY
DESIGN	X	01/06	
DRAWN	X	01/06	
CHECKED	X	01/06	24 OF 51

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

1/31/2006 n:\6495\Prod\civ\wgcpl11.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

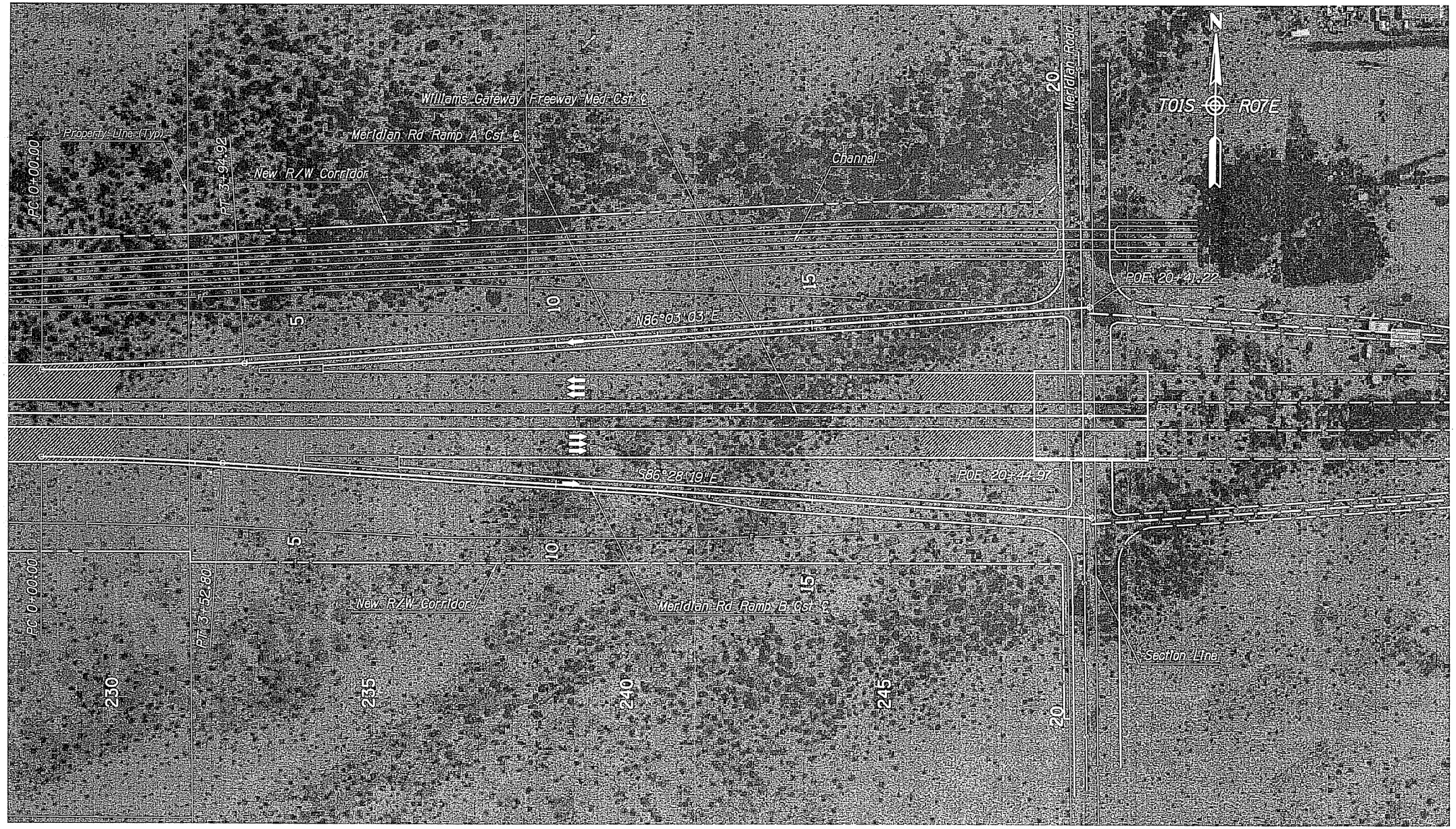


	MARICOPA ASSOCIATION OF GOVERNMENTS
DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777	PLAN SHEET STA 200+00 TO STA 228+00
	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY
PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING	25 OF 51

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

1/31/2006 n:\6495\Prod\civ\wgepl12.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM — 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

PLAN SHEET
STA 228+00 TO STA 249+02.25

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

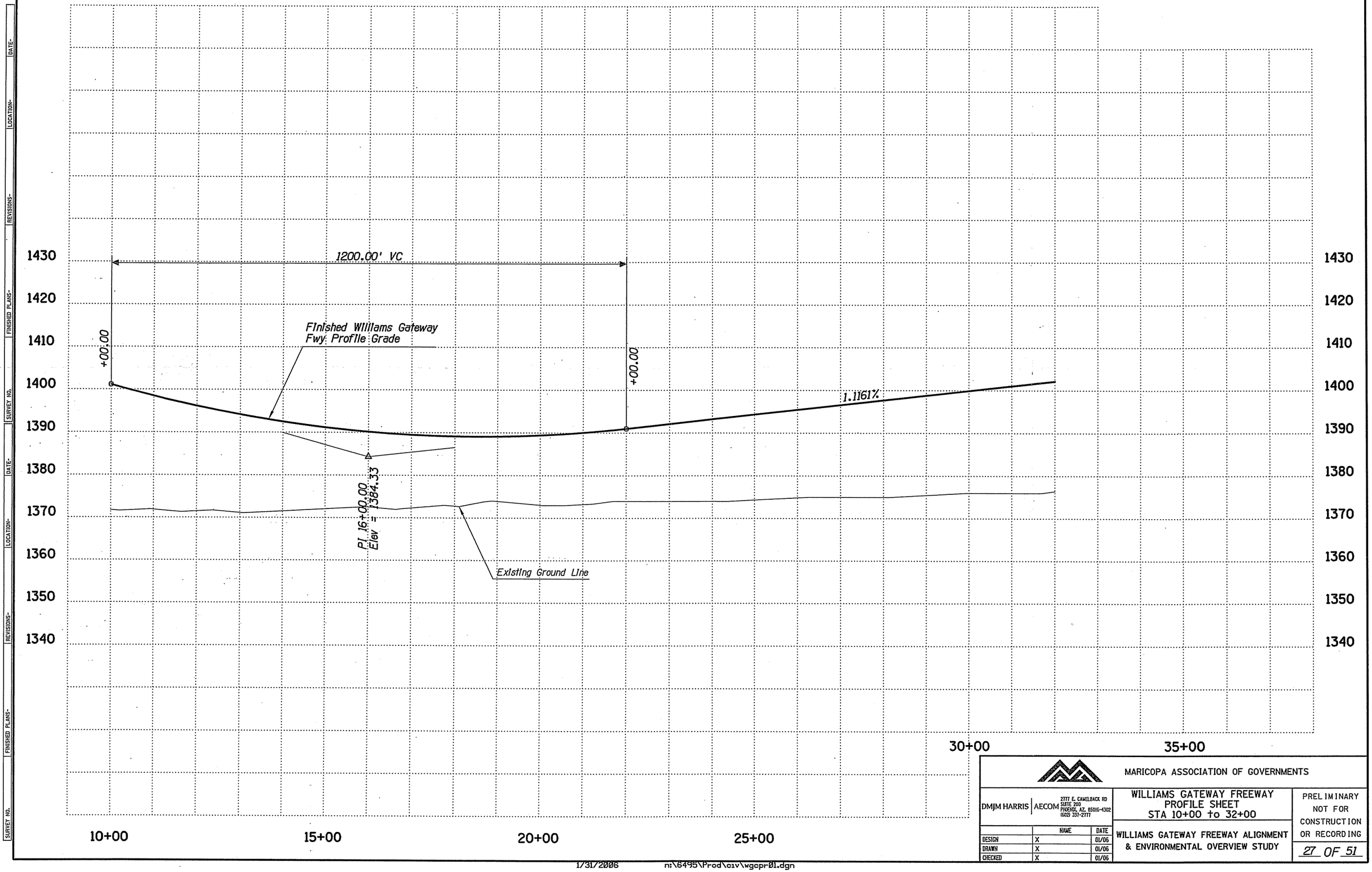
WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

26 OF 51

2/1/2006 n:\6495\Prod\civ\wgop113.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 10+00 to 32+00

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

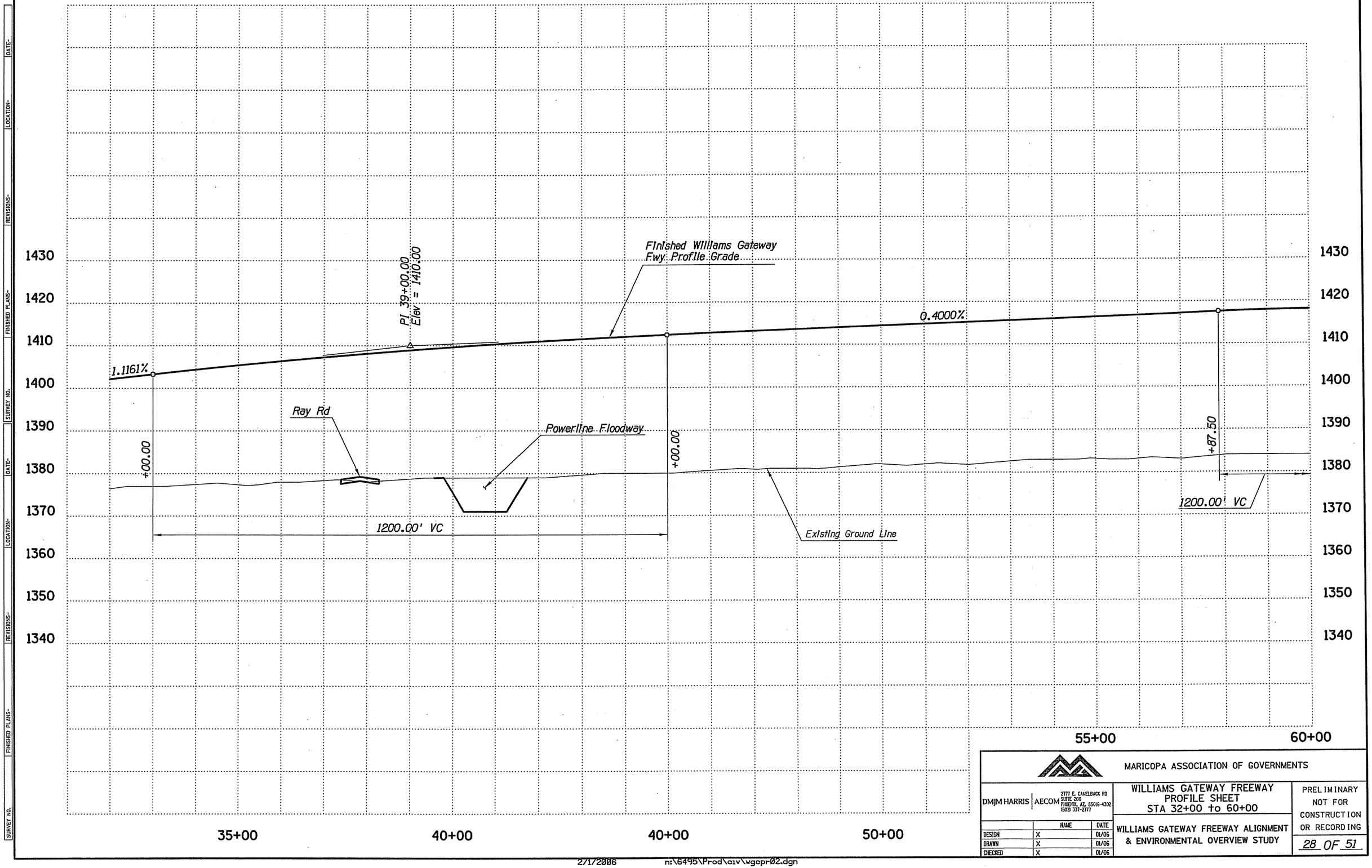
WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

27 OF 51

1/31/2006 n:\6495\Prod\civ\wgcpr01.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 32+00 to 60+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

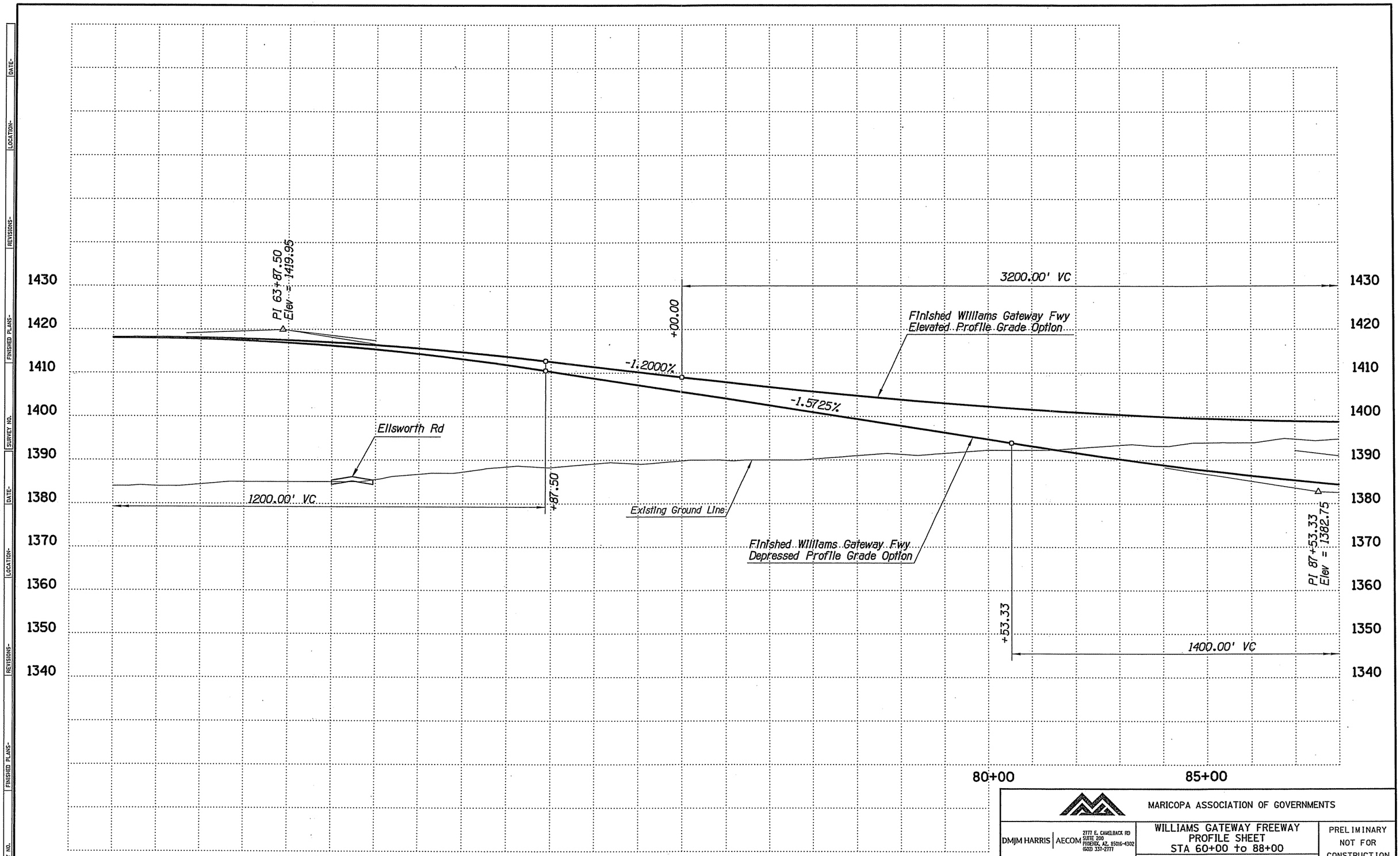
	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

28 OF 51

2/17/2006 n:\6495\Prod\civ\wgapr02.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

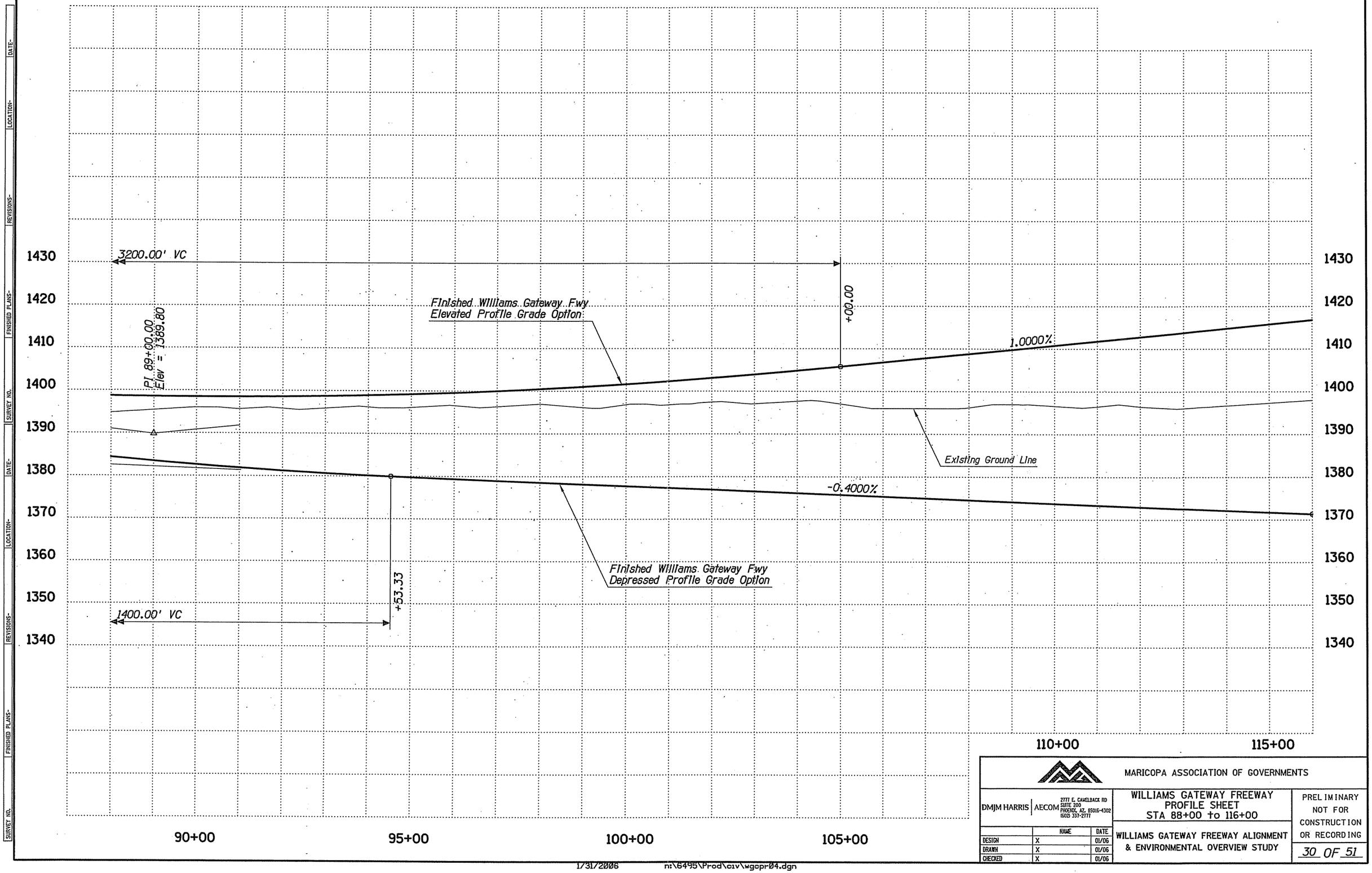
	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 60+00 to 88+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

2/7/2006 n:\6495\Prod\civ\wgepr03.dgn



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

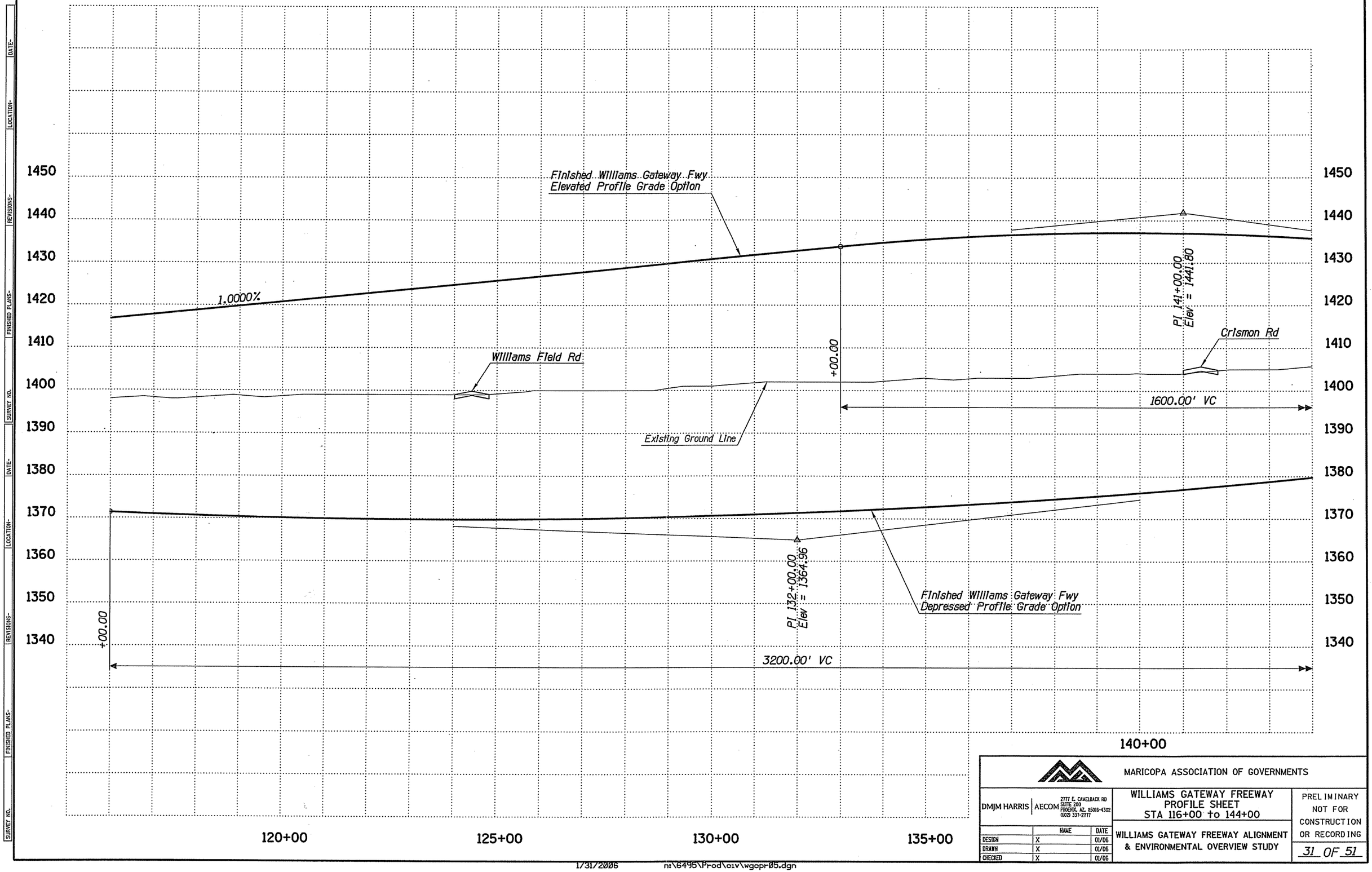
WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 88+00 to 116+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr04.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 116+00 to 144+00

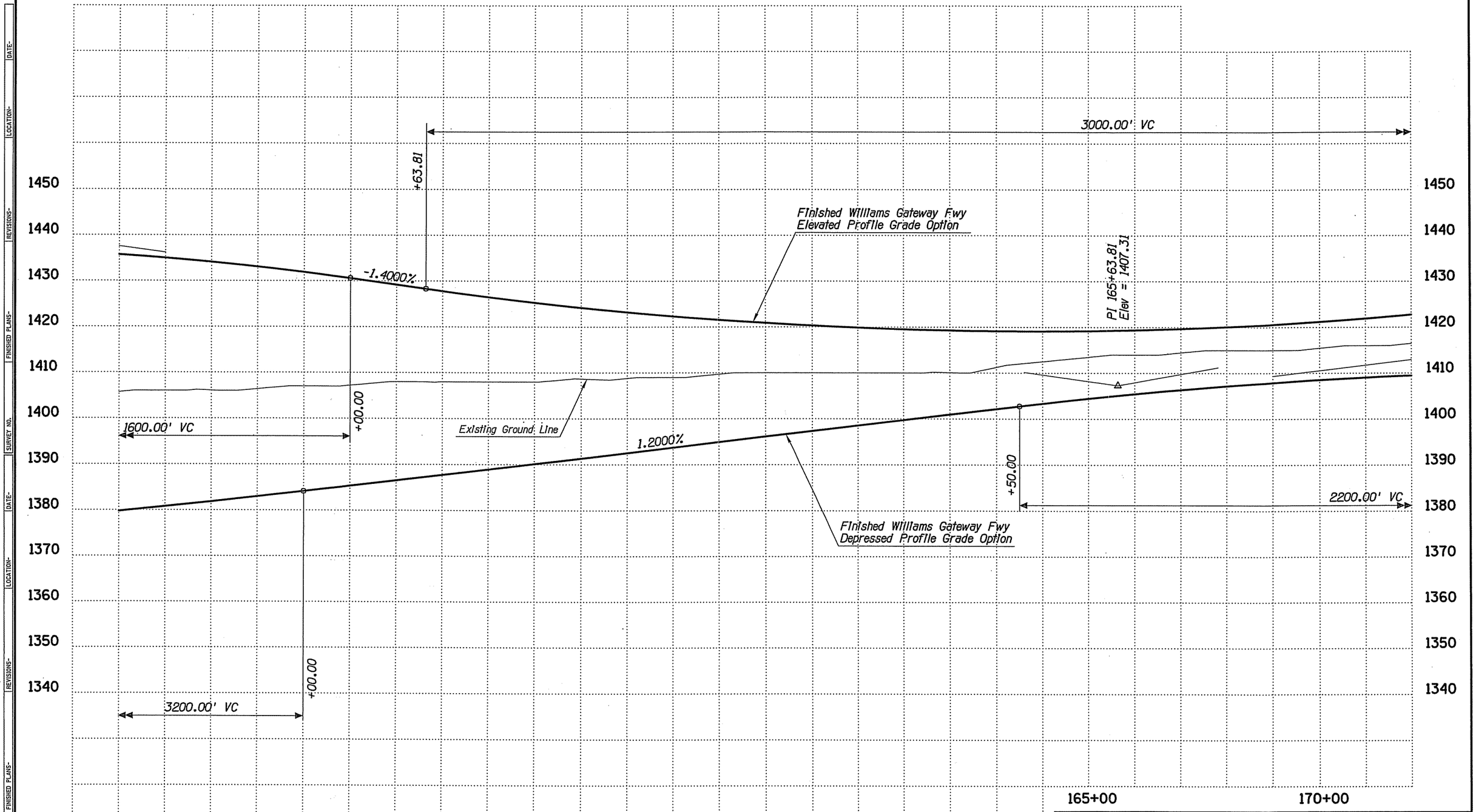
	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgepr05.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM — 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 144+00 to 172+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

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1/31/2006 n:\6495\Prod\civ\wgepr06.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

Finished Williams Gateway Fwy
Elevated Profile Grade Option

3000.00' VC

+63.82

1.8000%

-0.4000%

PI 192+83.72
Elev = 1456.27

Signal Butte Rd

+83.72

Existing Ground Line

+83.72

1000.00' VC

-0.9156%

PI 174+50.00
Elev = 1415.96

2200.00' VC

+50.00

Finished Williams Gateway Fwy
Depressed Profile Grade Option

PI 193+46.00
Elev = 1398.60

+46.00

1400.00' VC

1460
1450
1440
1430
1420
1410
1400
1390
1380
1370
1360

175+00
180+00
185+00
190+00
195+00
200+00

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 172+00 to 200+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgapr07.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

1000.00' VC

+00.00

+00.00

Finished Williams Gateway Fwy
Elevated Profile Grade Option

0.7200%

PI 205+00.00
Elev = 1451.40

Existing Ground Line

Meridian Rd

0.4000%

Finished Williams Gateway Fwy
Depressed Profile Grade Option

+46.00

1400.00' VC

1480 1470 1460 1450 1440 1430 1420 1410 1400 1390 1380 1370

200+00 205+00 210+00 215+00 220+00 225+00

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 200+00 to 228+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr08.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

Finished Williams Gateway Fwy
Elevated Profile Grade Option

0.7200%

-1.6000%

PI 247+50.00
Elev = 1482.00

PI 256+00.00
Elev = 1468.40

+50.00

+50.00

Existing Ground Line

Meridian Rd

1200.00' VC

PI 256+00.00
Elev = 1434.46

1.6000%

0.4000%

Finished Williams Gateway Fwy
Depressed Profile Grade Option

+96.00

PI 246+96.00
Elev = 1420.00

+96.00

800.00' VC

1480
1470
1460
1450
1440
1430
1420
1410
1400
1390
1380
1370

230+00
235+00
240+00
245+00
250+00
255+00

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

WILLIAMS GATEWAY FREEWAY
PROFILE SHEET
STA 228+00 to 256+00

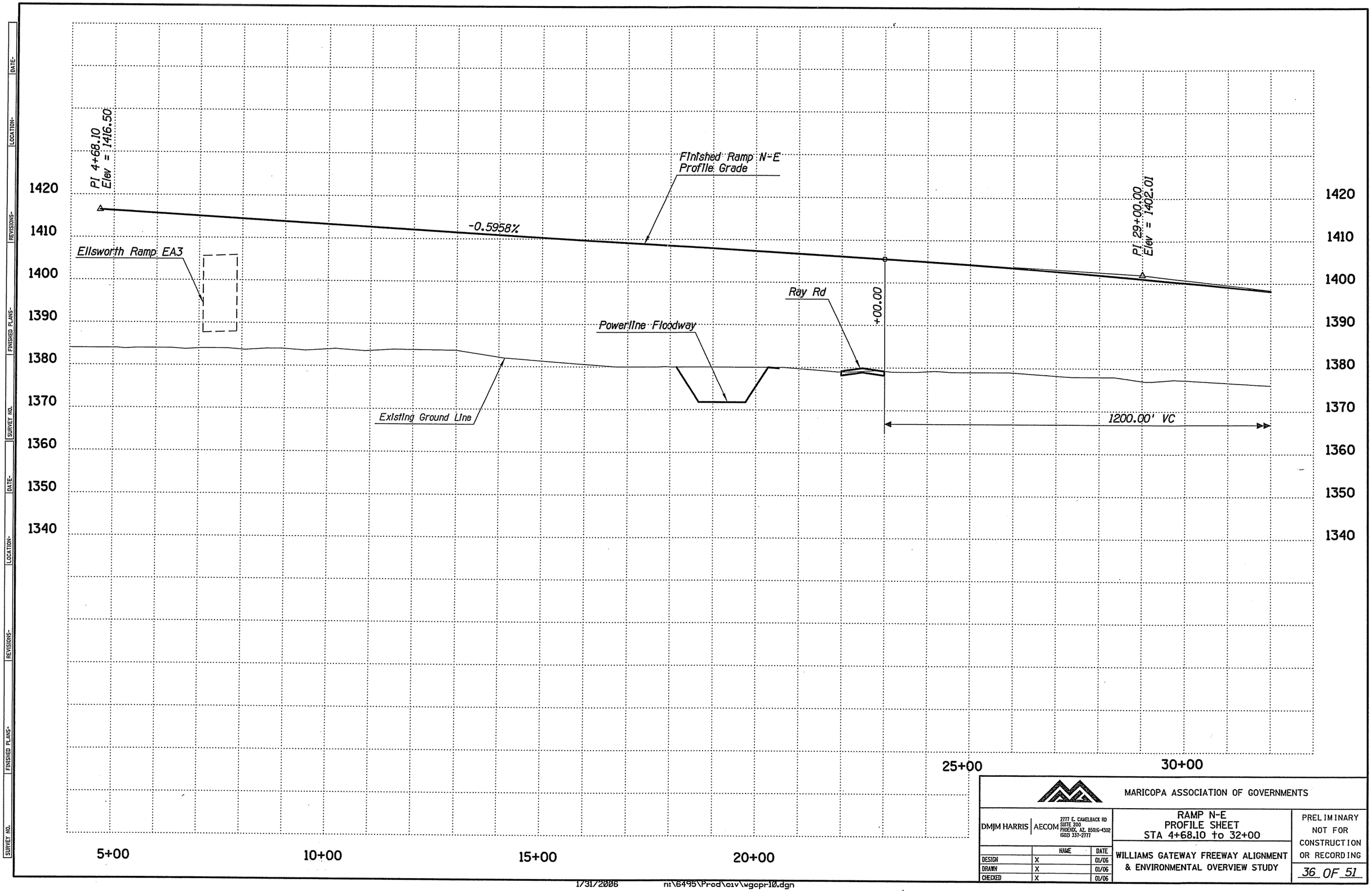
WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

35 OF 51

1/31/2006 n:\6495\Prod\civ\wgepr09.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

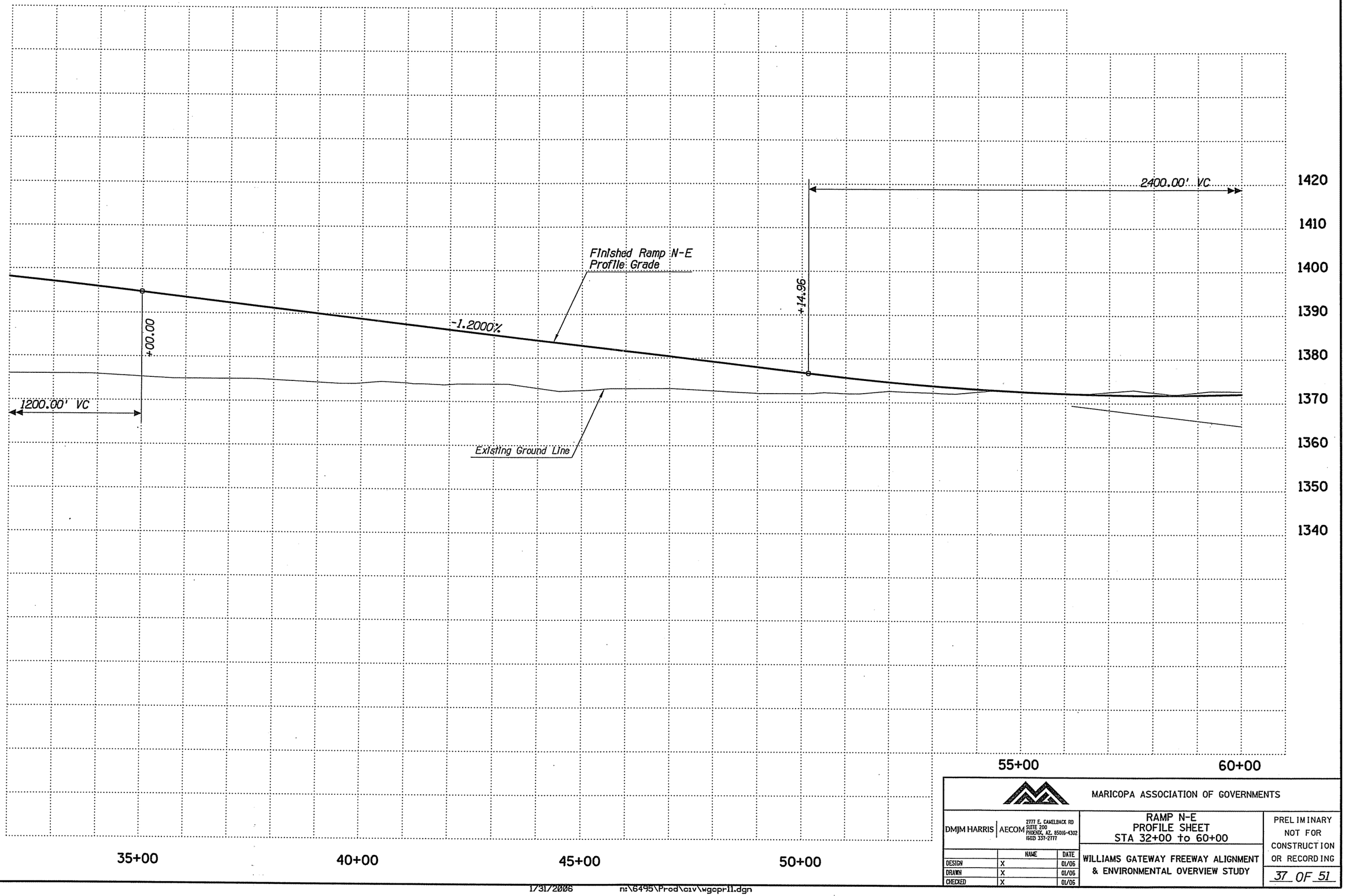
	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

RAMP N-E
PROFILE SHEET
STA 4+68.10 to 32+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgepr10.dgn



SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

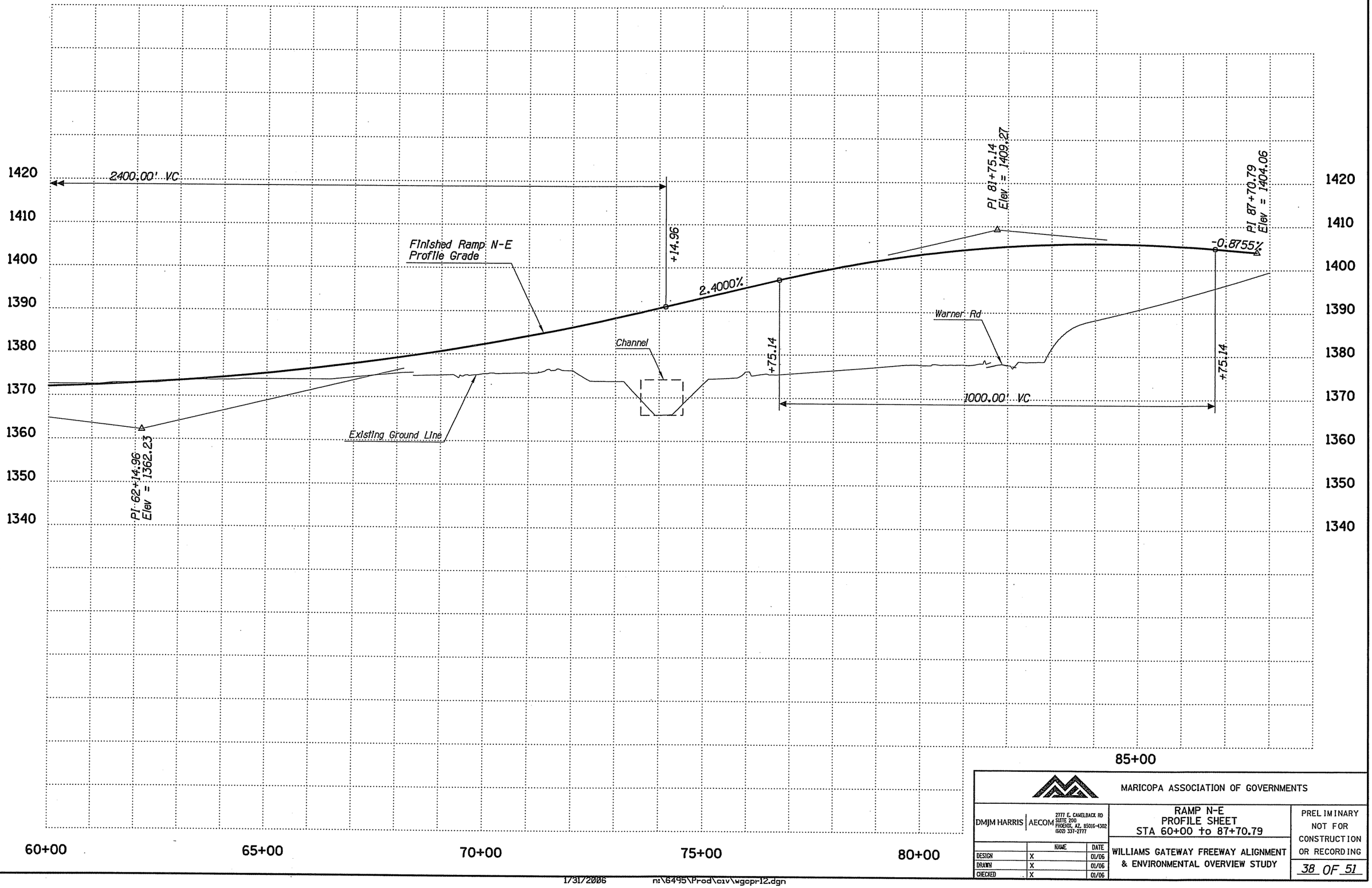
RAMP N-E
PROFILE SHEET
STA 32+00 to 60+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr11.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

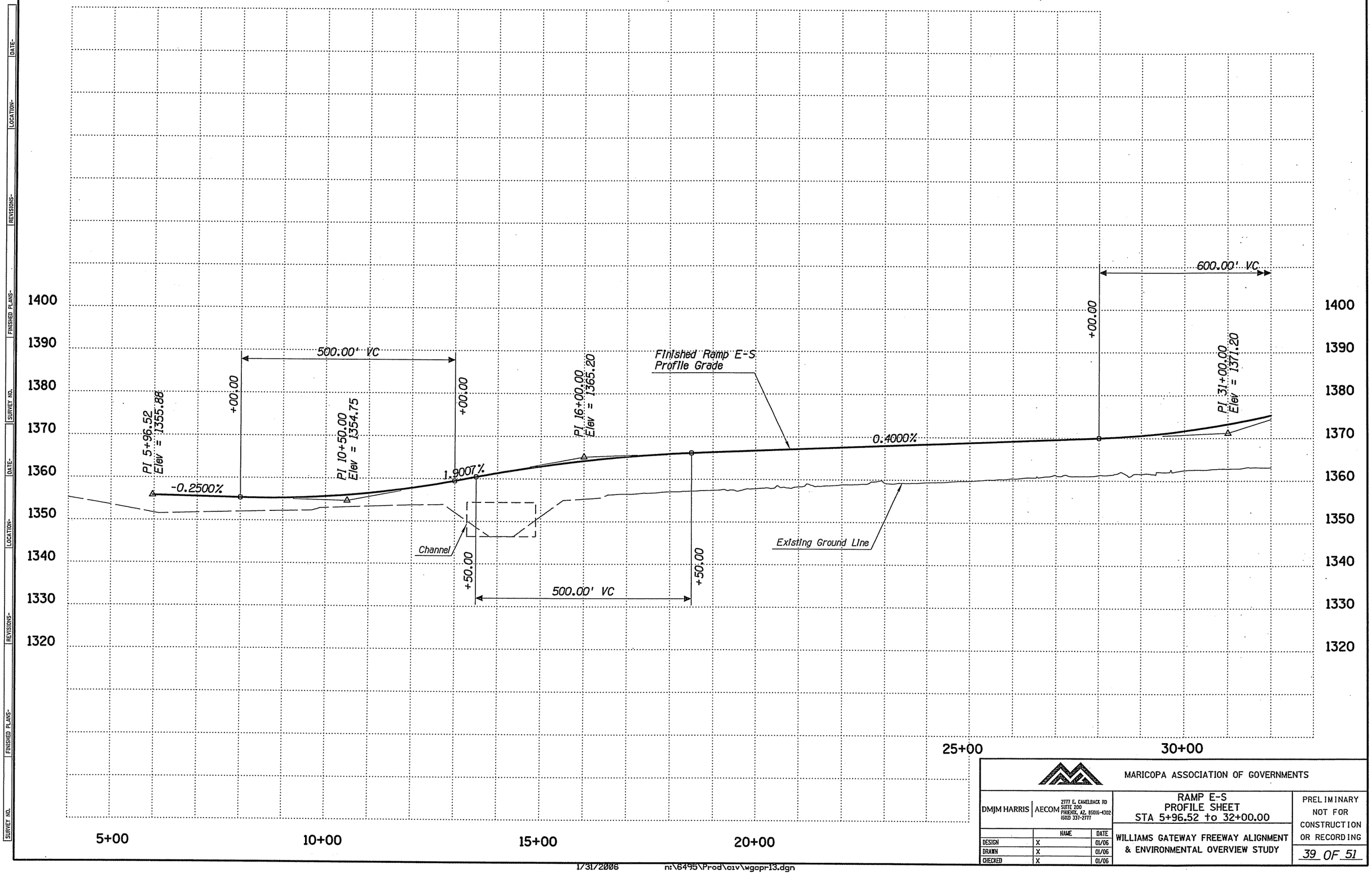


MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777	RAMP N-E PROFILE SHEET STA 60+00 to 87+70.79	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	38 OF 51

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

1/31/2006 n:\6495\Prod\civ\wgcpr12.dgn



SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

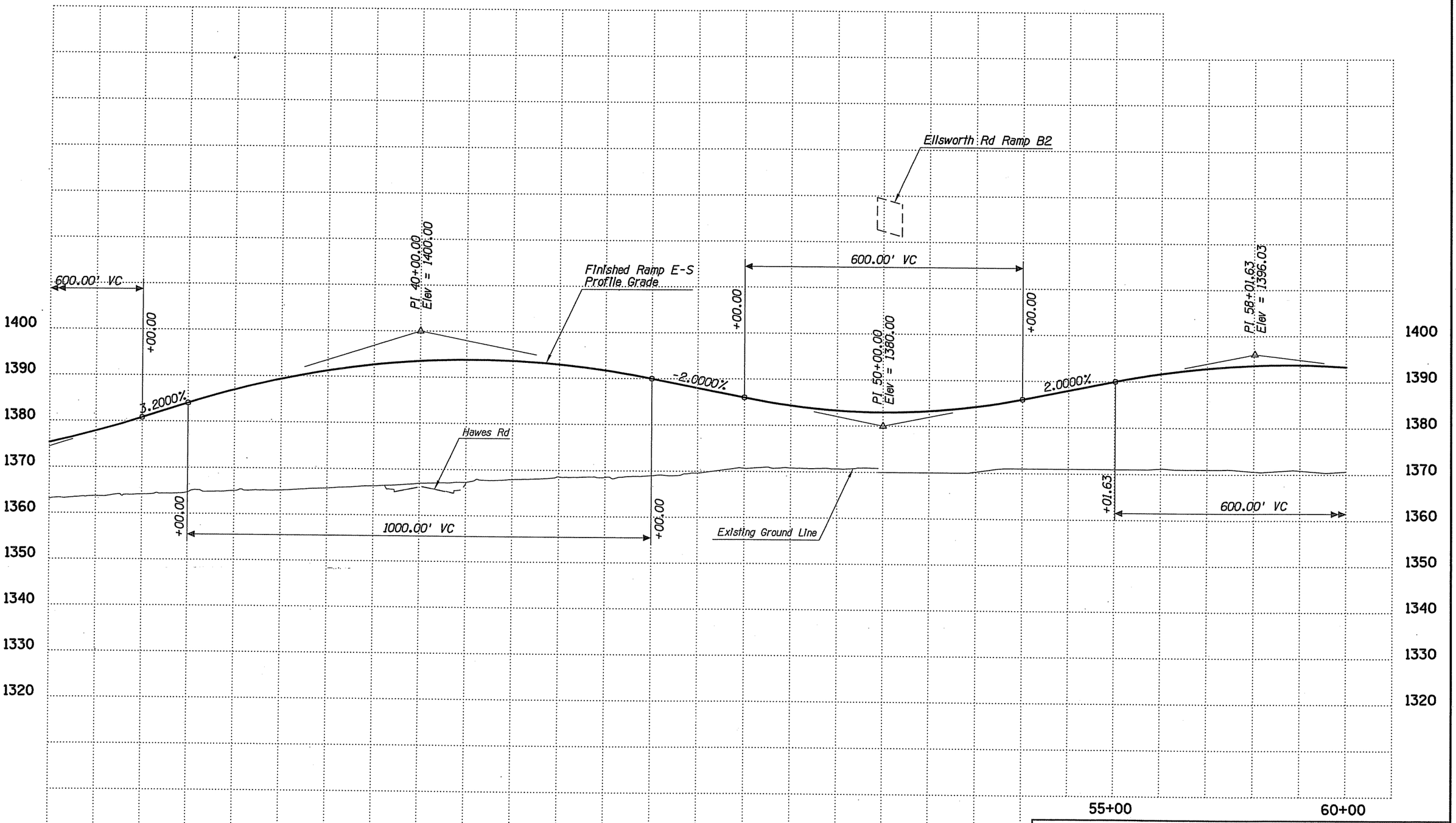
RAMP E-S
PROFILE SHEET
STA 5+96.52 to 32+00.00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr13.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 331-2777

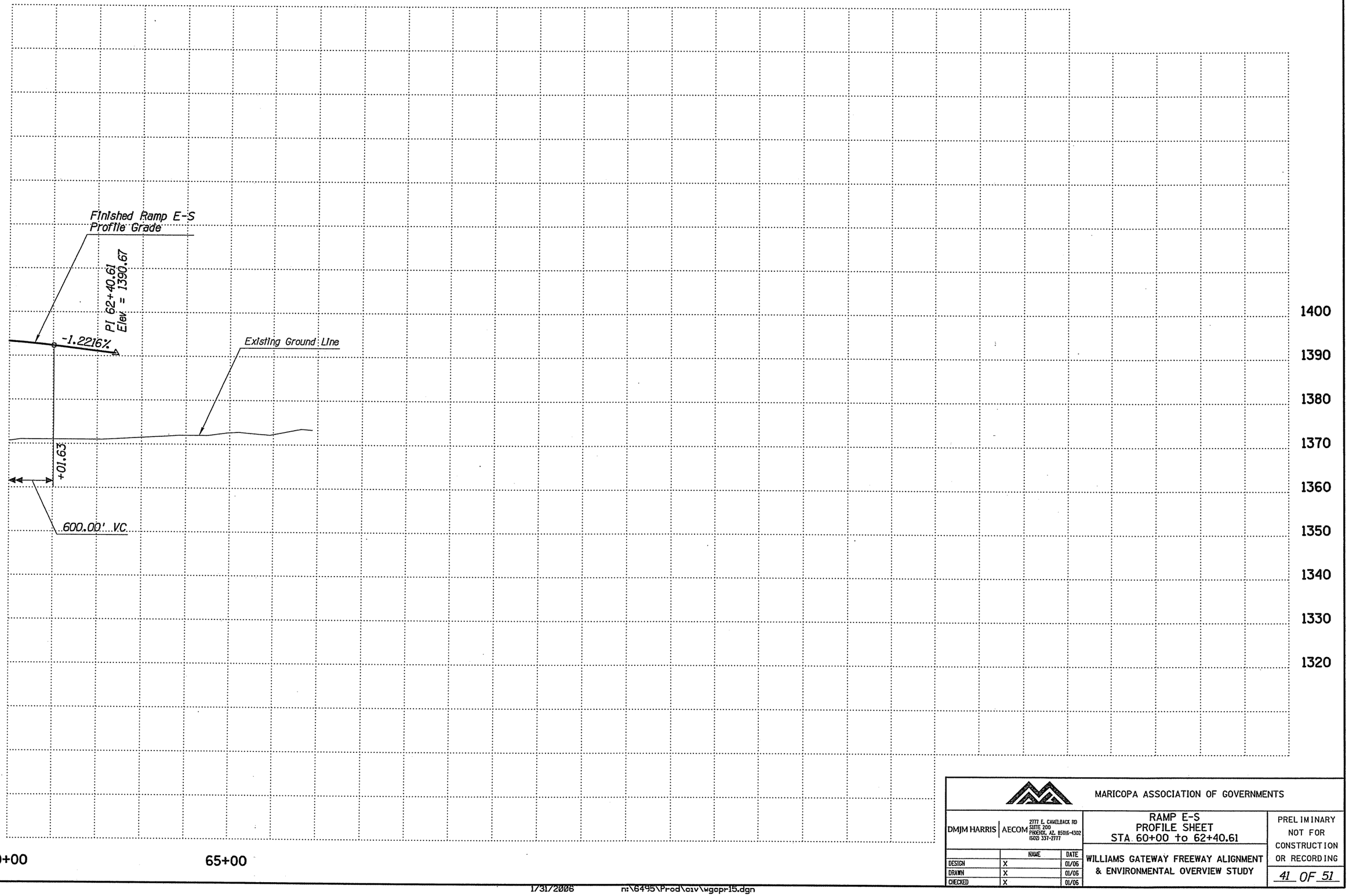
	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

RAMP E-S
PROFILE SHEET
STA 32+00 to 60+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr14.dgn



SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

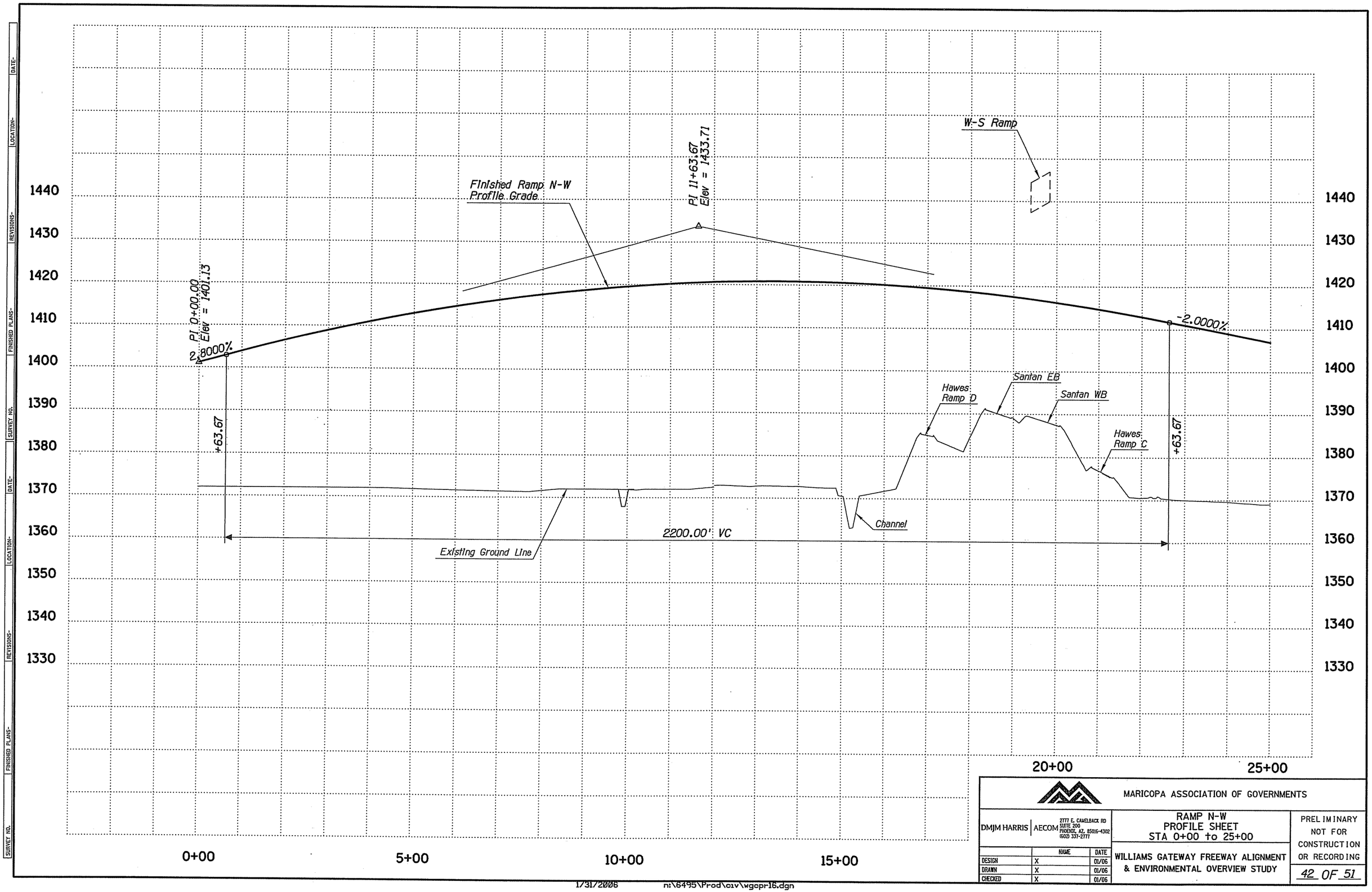
	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

RAMP E-S
PROFILE SHEET
STA 60+00 to 62+40.61

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgepr15.dgn



SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

RAMP N-W
PROFILE SHEET
STA 0+00 to 25+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgepr16.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

1430
1420
1410
1400
1390
1380
1370
1360
1350
1340
1330

Finished Ramp N-W
Profile Grade

-2.0000%

1200.00' VC

+00.00

Hawes Rd

Existing Ground Line

25+00 30+00 40+00 45+00 50+00

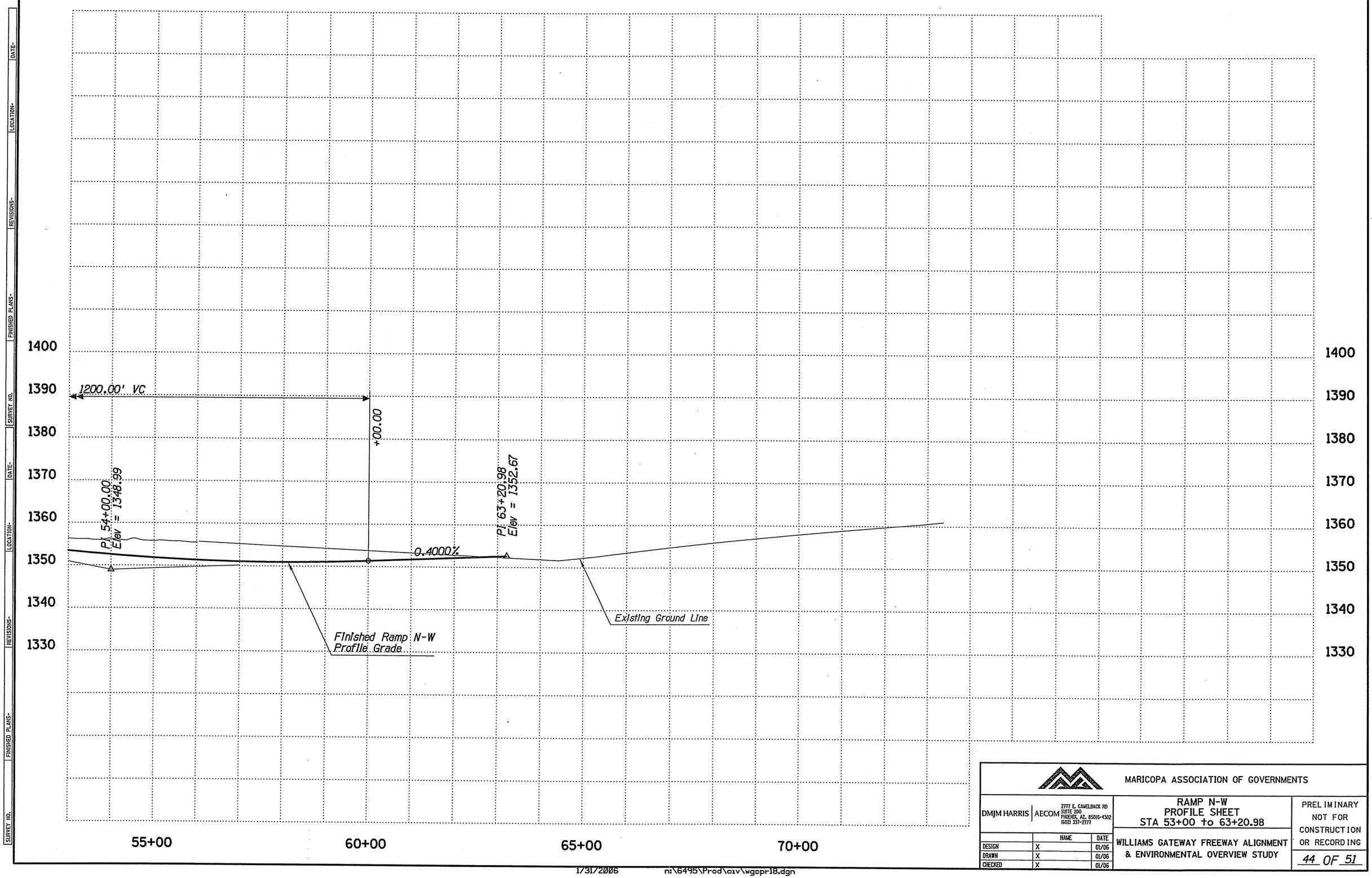
MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777			RAMP N-W PROFILE SHEET STA 25+00 to 53+00
	NAME	DATE	
DESIGN	X	01/06	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY
DRAWN	X	01/06	
CHECKED	X	01/06	

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

27272006 n:\6495\Prod\civ\wgopr17.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM — 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

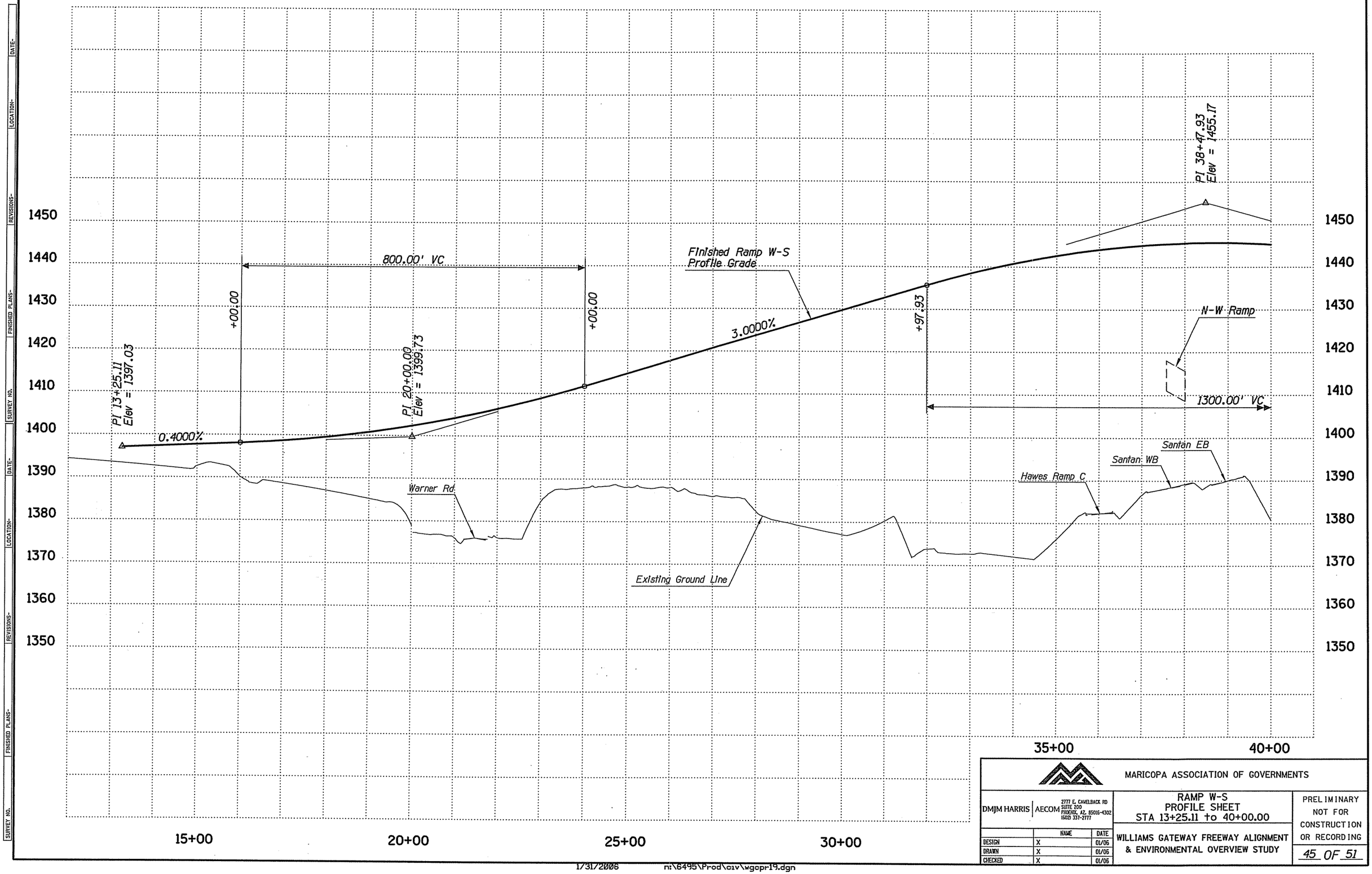
RAMP N-W
PROFILE SHEET
STA 53+00 to 63+20.98

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr18.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

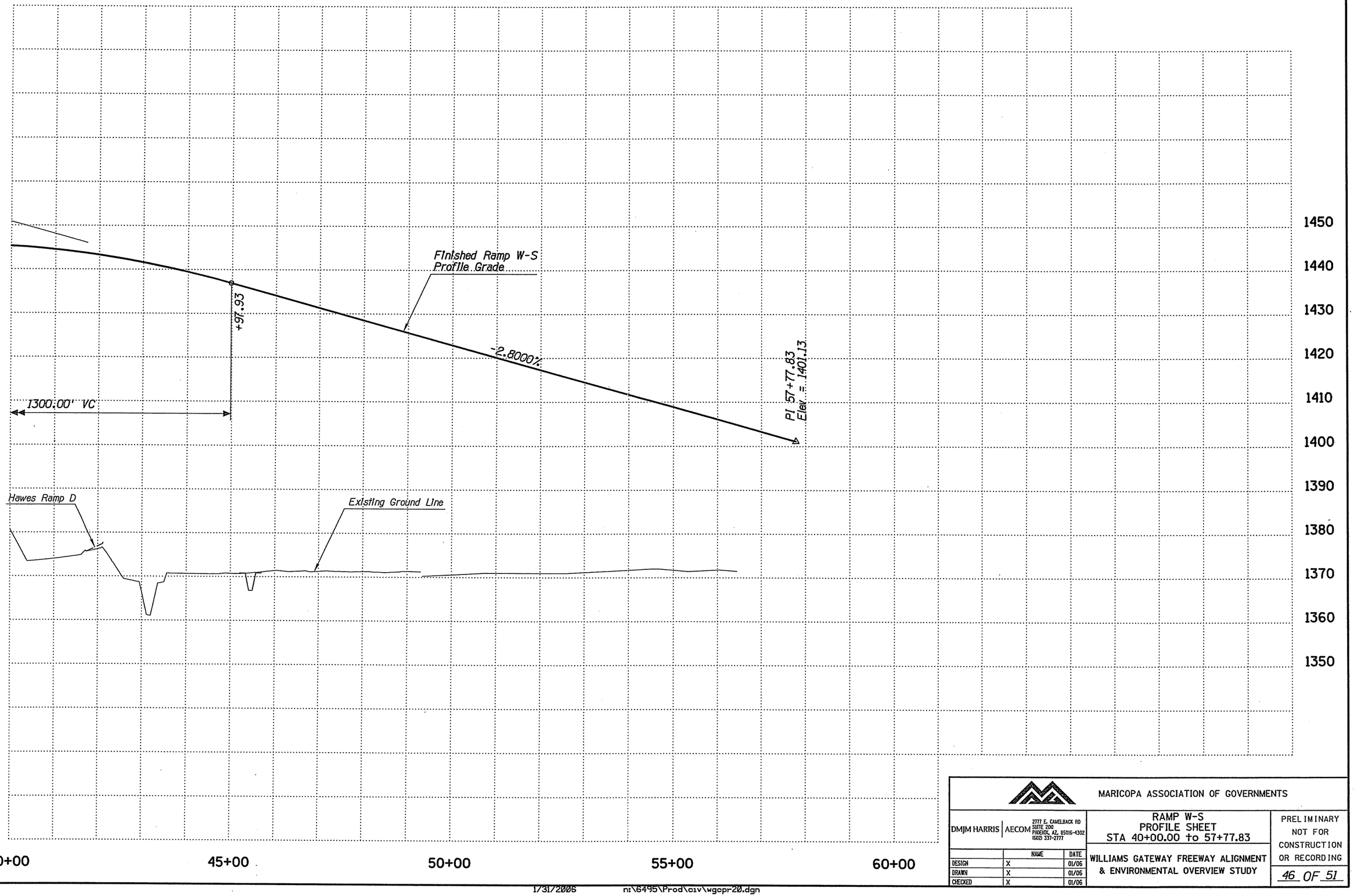


MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777	RAMP W-S PROFILE SHEET STA 13+25.11 to 40+00.00	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	45 OF 51

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

1/31/2006 n:\6495\Prod\civ\wgcpr19.dgn



LOCATION- | DATE-
REVISIONS-
FINISHED PLANS-
SURVEY NO.

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM
2777 E. CAMELBACK RD
SUITE 200
PHOENIX, AZ. 85016-4302
(602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

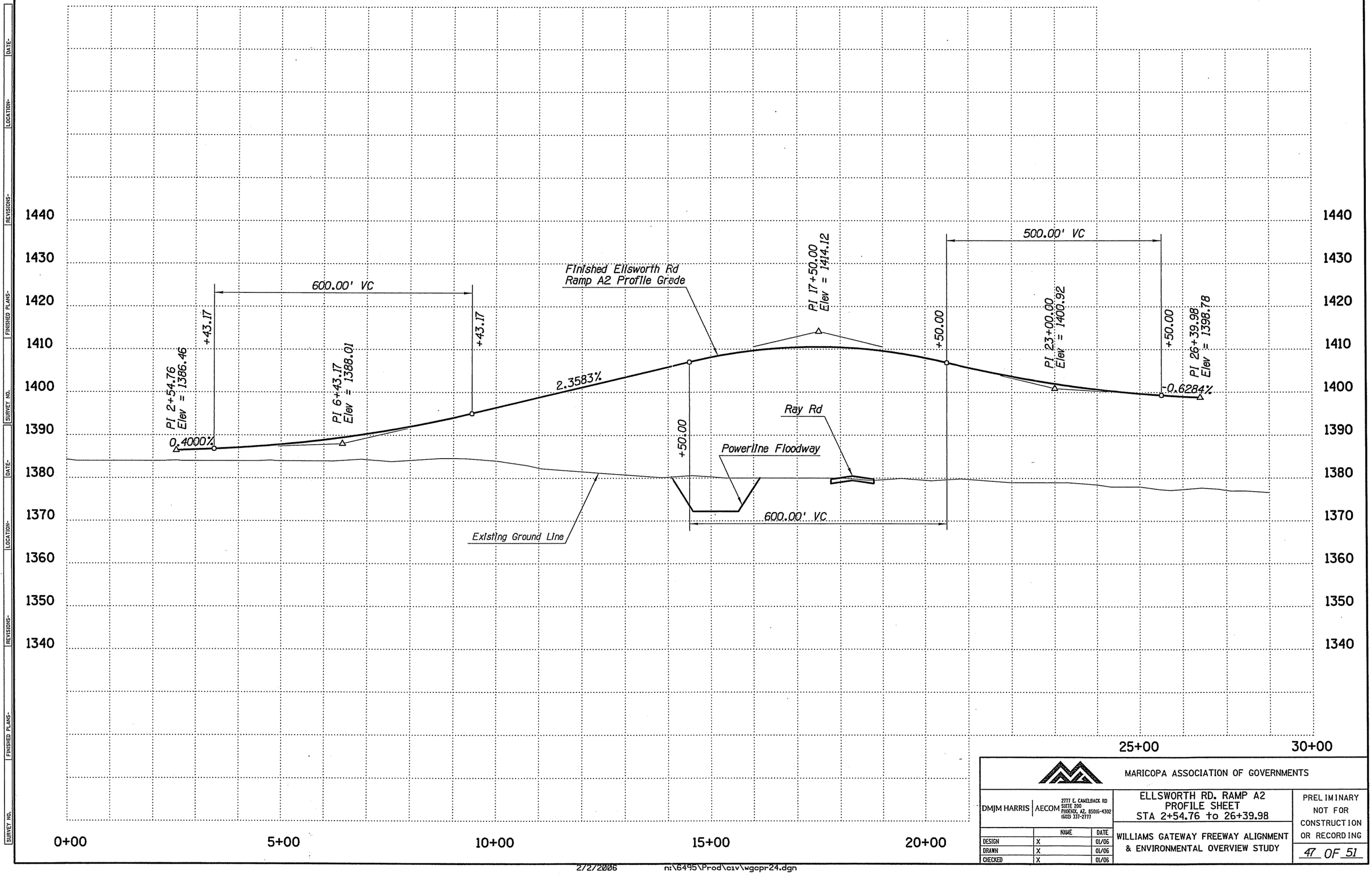
RAMP W-S
PROFILE SHEET
STA 40+00.00 to 57+77.83

WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgepr20.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777

ELLSWORTH RD. RAMP A2
PROFILE SHEET
STA 2+54.76 to 26+39.98

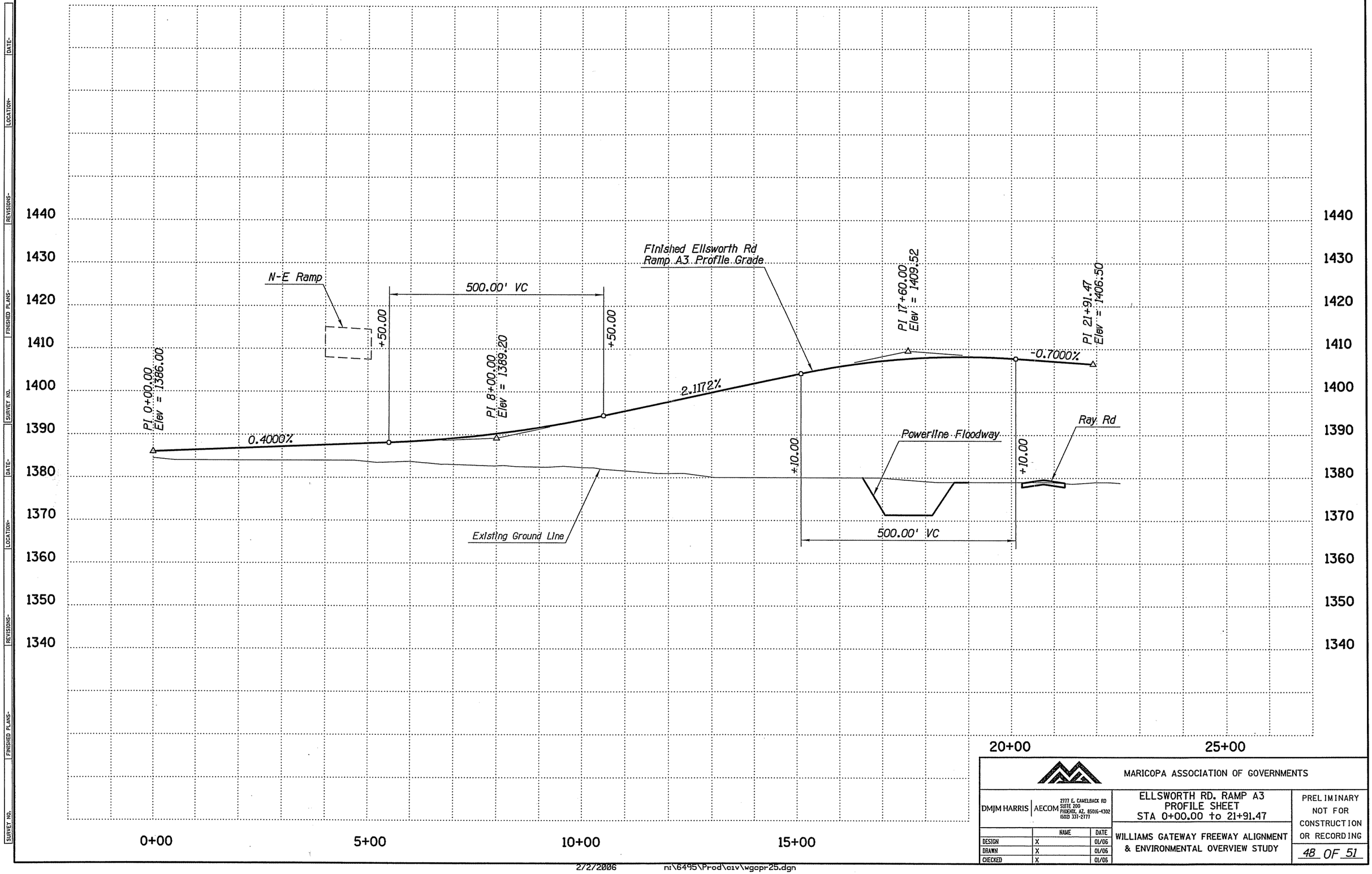
WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

2/27/2006 n:\6495\Prod\civ\wgopr24.dgn

SURVEY NO.	FINISHED PLANS-	REVISIONS-	LOCATION-	DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM	2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777

ELLSWORTH RD. RAMP A3
PROFILE SHEET
STA 0+00.00 to 21+91.47

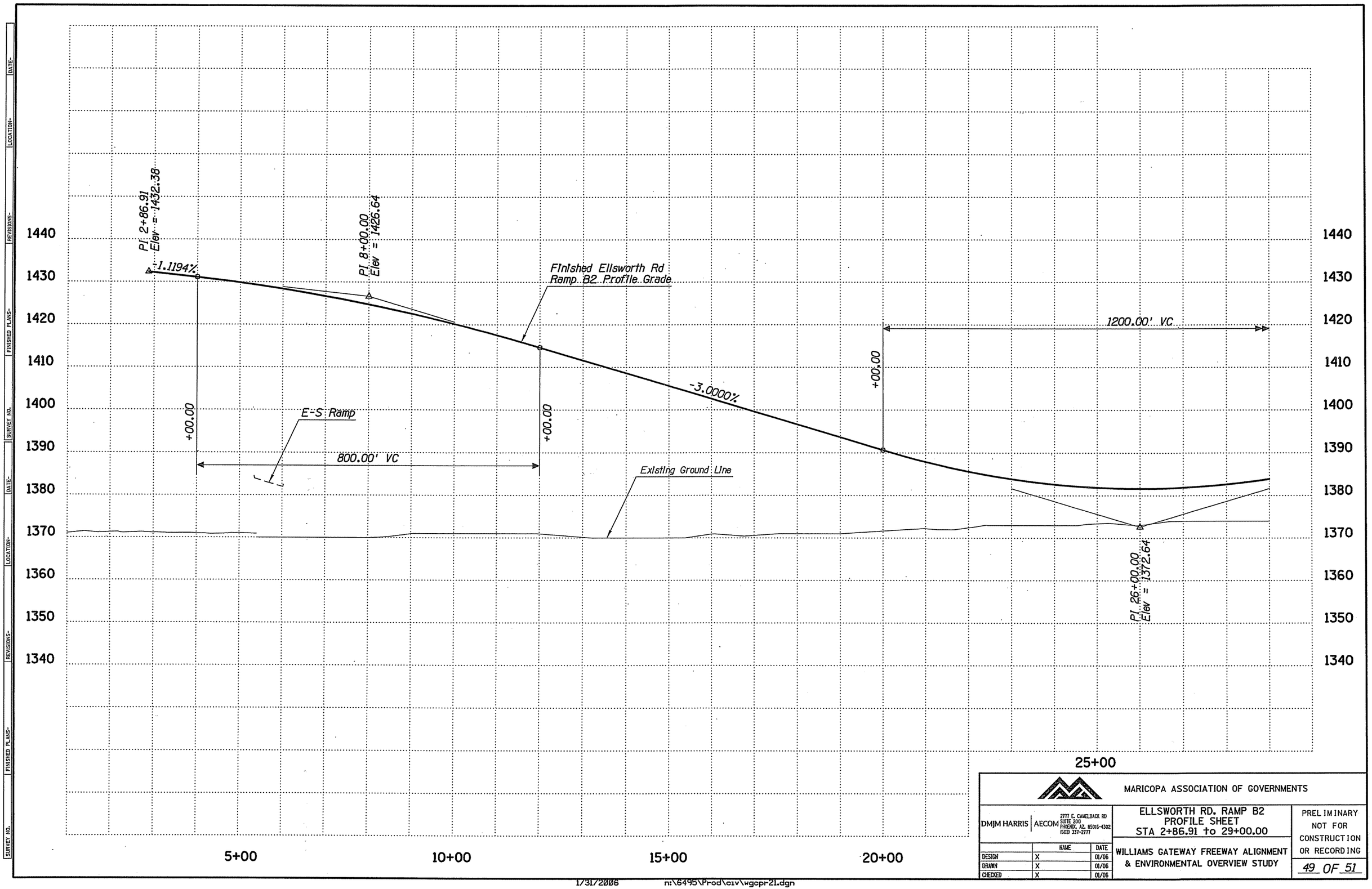
WILLIAMS GATEWAY FREEWAY ALIGNMENT
& ENVIRONMENTAL OVERVIEW STUDY

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

2/27/2006 n:\6495\Prod\civ\wgapr25.dgn

SURVEY NO. | FINISHED PLANS- | LOCATION- | REVISIONS- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777	ELLSWORTH RD. RAMP B2 PROFILE SHEET STA 2+86.91 to 29+00.00	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	49 OF 51

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

1/31/2006 n:\6495\Prod\civ\wgepr21.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-

1440
1430
1420
1410
1400
1390
1380
1370
1360
1350
1340

1200.00' VC
+00.00
3.0000%
+63.71
PI 40+63.71
Elev = 1416.55
Finished Ellsworth Rd
Ramp B2 Profile Grade
-0.8000%
Ray Rd
Powerline Floodway
Existing Ground Line
+63.71
1200.00' VC

30+00
35+00
40+00
45+00
50+00
55+00

MARICOPA ASSOCIATION OF GOVERNMENTS

DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 337-2777

	NAME	DATE
DESIGN	X	01/06
DRAWN	X	01/06
CHECKED	X	01/06

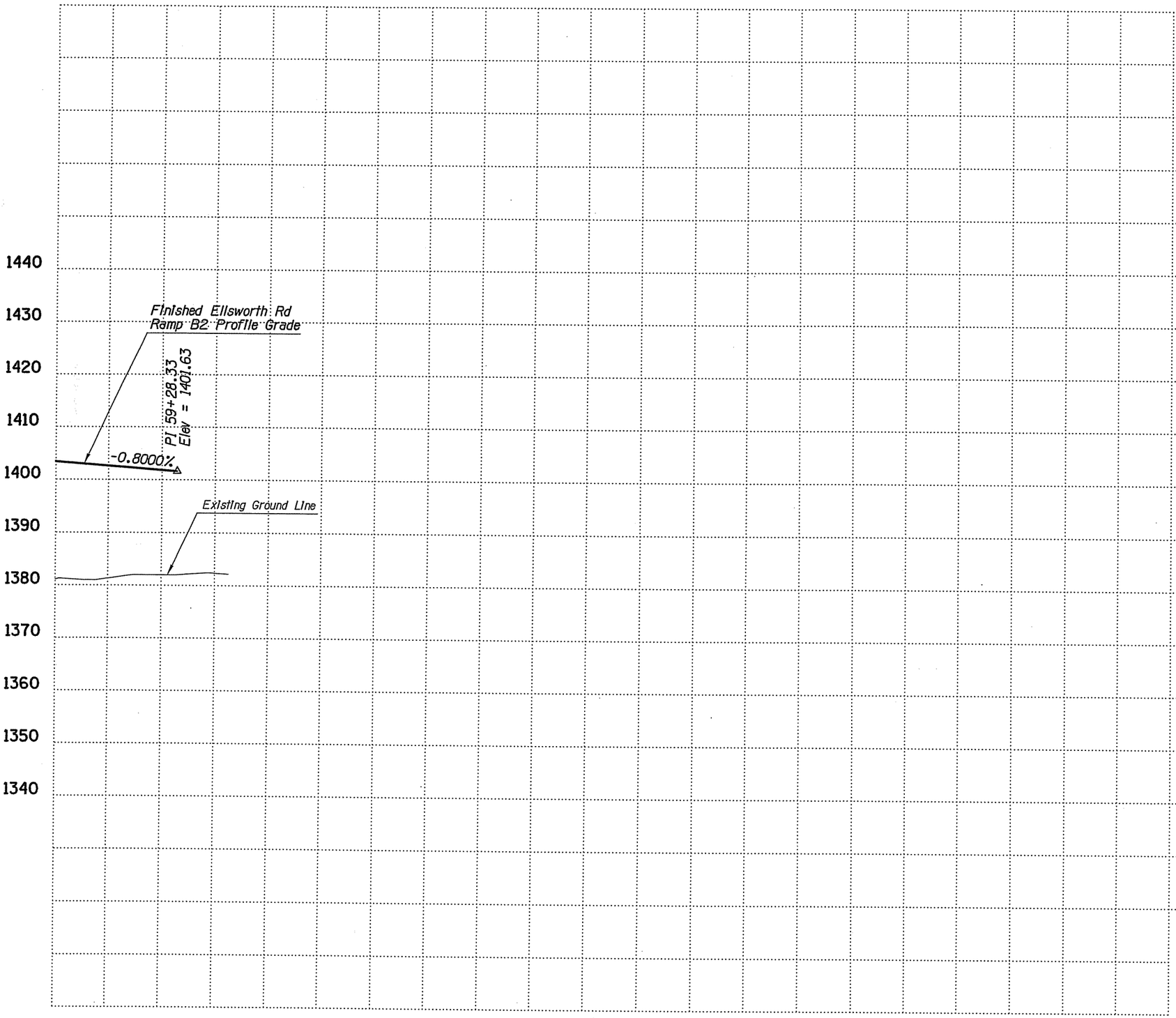
ELLSWORTH RD. RAMP B2
PROFILE SHEET
STA 29+00 to 57+00

WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

1/31/2006 n:\6495\Prod\civ\wgcpr22.dgn

SURVEY NO. | FINISHED PLANS- | REVISIONS- | LOCATION- | DATE-



MARICOPA ASSOCIATION OF GOVERNMENTS		
DMJM HARRIS | AECOM 2777 E. CAMELBACK RD SUITE 200 PHOENIX, AZ. 85016-4302 (602) 331-2777	ELLSWORTH RD. RAMP B2 PROFILE SHEET STA 57+00.00 to 59+28.33	PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
NAME / DATE: DESIGN X 01/06; DRAWN X 01/06; CHECKED X 01/06	WILLIAMS GATEWAY FREEWAY ALIGNMENT & ENVIRONMENTAL OVERVIEW STUDY	51 OF 51

1/31/2006 n:\6495\Prod\civ\wgepr23.dgn